

August 18, 1986

Chemical Marketing Reporter

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CMR MARKET INDEX

CHEMICAL MARKETING REPORTER's market index of chemicals and related materials (100=1974 average), based on 97 key commercial chemicals, appears alongside with data for two weeks ago, last month and last year.

Chemical Prices Start on Page 77

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CHEMICAL MARKETING CUES

METHIONINE: Producers say further price increases are possible in '86. Page 22
ORGANIC PEROXIDE: Producers say July price hikes are mostly successful. Page 22
CAPROLACTAM: Supplies are expected to remain tight with good demand. Page 11
PALM OIL: Prices are falling due to over supply, weak export movement. Page 11

Chemical Marketing Reporter

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NEWSPAPER

INSIDE CMR

OIL PRICES: OPEC agreement provokes a swift reaction at the basic petrochemical level. Some analysts doubt performance. Page 3

APAP: New entry in the field has disputed impact on the market. One advantage: Inherited base. Another question, what about Celanese? Page 4

SUBURBIO MART: Despite strike at Noranda Mines facility, Northeast region seems to be holding up. September return seen. Page 7

CHEMICAL INCOME: It's seen 22 percent higher in 1987 than it was this year, when it grew 35 percent. Dow, ICI benefited. Page 9

SWEETENERS: Pfizer enters a would-be competitor to aspartame in FDA approval pipeline. It could take years to complete the process. Page 7

SUPERFUND: CMA is apparent winner in battle to keep feedstock taxes where they stand now. Further damage to gulf area was feared. Page 5

ENVIRONMENT: One analyst sees ready solution to plant problems. An ounce of prevention is better than a pound of cure. Page 6

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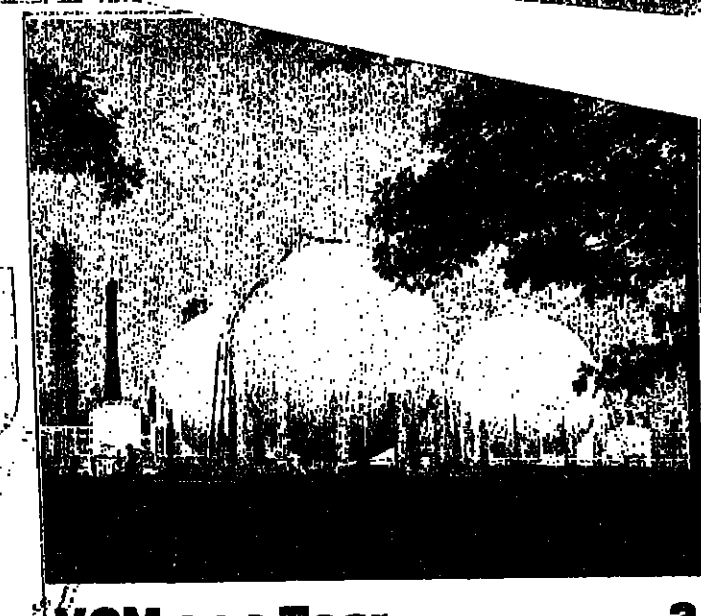
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SAUDI CRUDE MOVES OUT: Some analysts doubt that the current OPEC agreement will hold up any better than the previous ones. So far most price increase are paper transactions.

The risk assessment guidelines met a generally favorable response from the American

Continued on Page 26

Continued on Page 21

SEPTEMBER 1, 1986

At home, strong housing markets have

Exports are committed two months
Continued on Page 18

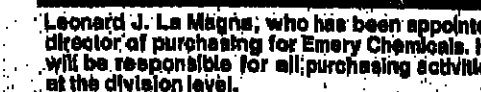
Continued on Page 21

VISTA VCM: Detail of Lake Charles facility. US VCM plants have been running close to 100 percent of capacity and should continue to do so next year.

Continued on Page 22

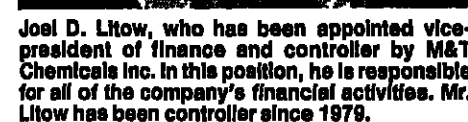
Overall, market prices have been stable. The two largest producers, Mallinckrodt Inc.

Olin also makes "HTH" and "Pace" swimming pool chemicals.



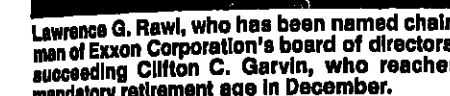
Revlon Group last week commenced a previously announced tender offer for any and all of the outstanding shares of Frigritron Inc. at \$35.50 per share, or approximately \$116 million for the entire company.

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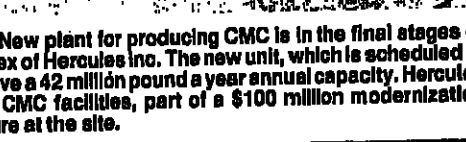
DSM thinks the high utilization rate of the two crackers and the employment of main liquid feedstocks (naphtha and gasoil) will ensure availability of C9 resinfeed.

100



agreed to settle out of court to avoid the cost of protracted litigation.

Kline reports that 300 chemical distributors operate in the United States. Although the majority of companies



Kline reports that over 1,000 industrial chemical distributors operate in the United States. Although the majority of companies

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son, colon and prostate cancers, a 91-year-old male, 30 stomach cancers occurred among the Dow workers, whereas 24.4 were expected based on the US population.

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Coastal in Catbird Seat?

Coastal Petroleum Corporation's protracted legal battle against seven phosphate firms moves into a new phase in early February, when a trial is scheduled to begin in Federal court in Florida between Coastal and one of the phosphate firms, International Minerals & Chemical Corporation.

At least one analyst thinks IMC would do well to settle the suit out of court, saying defeat for the firm would be financially "devastating."

Indeed, Coastal is seeking \$3.5 billion in compensatory damages alone from IMC, plus whatever punitive damages the jury might award. Coastal won't say what it is seeking from the other phosphate companies, including Mobil Corporation, W.R. Grace & Co. and American Cyanamid Company.

Calvert Cray, a litigation analyst at Bear Stearns & Co. in New York, says the "stakes are extraordinarily high" for IMC, adding, "Their position does not look very good."

Mr. Cray points to a May ruling by Florida's supreme court, overturning quiet title deeds of the phosphate com-

panies to land beneath the state's navigable rivers and lakes.

The deeds are challenged by Coastal and the State of Florida. Coastal claims the phosphate firms wrongly removed millions of tons of phosphate from lands leased by Coastal from the state. It will be up to Coastal to prove in Federal court that the waterways in question are navigable.

"You don't have to get an ocean liner up there" to demonstrate navigability, says Bear Stearns' Mr. Cray, who thinks Coastal should shoot for an out-of-court settlement of around \$100 million. "Not that much more could be recovered without putting (IMC) in serious jeopardy," according to Mr. Cray.

Coastal declined to comment on what it thought a fair out-of-court settlement would be, but expressed a willingness to negotiate. "From day one," a spokesman says, "Coastal has always indicated it would rather settle than litigate, but thus far, all it has received is the back of the hand."

For its part, IMC has expressed no inclination to settle out of court. "We feel we will be vindicated through the courts," an IMC spokesman said last week.

Plastic Molding Industry Being Sought for Florida

Louisiana State University College of Engineering is seeking support from government and industry to help Louisiana develop an injection-plastic-molding industry in the state.

Such an industry could bring \$500 million to Louisiana in five years and \$5 billion in 10 years, says Dr. Robert McIlhenny of LSU. Some 30 Louisiana companies are currently producing resins for molding plastics, but the state has only 10 firms that actually mold the plastic.

"What this means is that the state is exporting low-priced raw materials, primarily to northern industrial centers, and importing high-priced finished parts from molding companies."

"If a major molding industry could be developed within Louisiana, the state could convert its raw materials into finished pieces and export them as value-added product," Dr. McIlhenny says.

The LSU engineer heads the LSU Engineering Center for Analysis and Instructional Development. The organization, made possible by a national Control Data Engineering Centers Network program, could foster a plastic molding industry within the state, McIlhenny said.

"But to do that, we need a strong commit-

ment from the state and industry — LSU and Control Data have already made the commitment," said Dr. McIlhenny. He said some \$800,000 is needed to provide a stable base for the University-industry program.

"The creation of a center for computer-aided design of molds and computer-integrated engineering of plants has the potential for turning the existing plastics deficit situation around," he said.

Dr. McIlhenny said the result would be that "small start-up industries would be stimulated by the existence of a specialized university research center and that these could then be expected to be followed by relocation of larger company facilities taking advantage of the expertise concentration."

"We are definitely not talking about a cottage industry," said Dr. McIlhenny.

He said in 1985 the total US production of resins was reported to be approximately 47.4 billion pounds, about one-third fabricated into formed plastic parts.

"If a modest price of \$3 per pound of finished product is assumed, the total annual sales should approach \$60 billion. An aggressive program to bring this industry to Louisiana could result easily in the capture of 10 percent of the market, or \$6 billion per year."

Continued on Page 25

Owens-Corning Seeks Ways to Avoid Takeover

Owens-Corning Fiberglass Corporation says it will undertake a broad restructuring and recapitalization plan in the hopes of discouraging an unsolicited takeover attempt by Wickes Companies.

Wickes has mounted an unfriendly takeover attack against Owens-Corning in recent weeks. The OCF board recently rejected a \$2.1 billion, \$74-per-share offer from Wickes. To defend against further Wickes offers, the OCF board unanimously approved the restructuring plan last Thursday.

The cornerstone of OCF's restructuring program will be the sale of the company's aerospace and strategic materials group, acquired just last year. OCF says it expects to generate \$700 million in cash after taxes by the sale of the aerospace group and other unidentified assets. The company also plans to reduce operating expenses by over \$100 million next year, while slashing capital outlays from \$220 million to \$100 million.

The cash generated by the assets sales will

be applied to an elaborate stock repurchase plan authorized by the board. Public stockholders will receive \$52 in cash, \$35 principal amount of new "Junior Subordinated Discount Debentures" and one share of common stock in the recapitalized company.

In addition, OCF says it will raise \$1.5 billion in bank financing and \$300 million through the sale of senior subordinated debt in order to finance the recapitalization. About \$325 million of the company's \$519 million in existing debt will remain outstanding. The company will also maintain a \$100 million "seasonal line" of cash for general corporate purposes.

William W. Roetschstein, chairman and chief executive officer of OCF, said in a statement last week, "the board believes that the recapitalization is an approved financial alternative to the Wickes offer," which he says the board unanimously rejected. A special stockholder

Continued on Page 25

Sulfuric Acid Mart Weathers A Strike

Despite a strike at Noranda Inc.'s Valleyfield, Quebec, zinc smelter, no serious disruptions have been caused in the Northeast sulfuric acid market. Noranda accounts are now being filled by acid from a number of sources. Observers say tightness in the market has resulted, but that no actual supply shortage exists.

The strike at the Noranda subsidiary, Canadian Electrolytic Zinc, began on or about June 6. While nothing official has been announced, indications are that workers are prepared to return in early September.

Also affecting sulfuric supplies are repairs at a government-run dock that services Noranda's copper smelter at Gaspe, New Brunswick. The repairs have interrupted sulfuric shipments since the end of July. The company expects the repairs to be completed by the end of September.

The smelter at Valleyfield produces, on average, about 430,000 metric tons per year of 100 percent acid, according to Noranda. The Gaspe facility makes about 120,000 metric tons per year.

Despite the large amount of acid taken off the market, Noranda says all accounts are being filled, most at the same prices they had been paying. Other industry sources generally agree with this, and say that, likewise, overall market prices have not changed significantly since the strike began.

Noranda accounts are being serviced in a

number of different ways. Noranda acid has traditionally been shipped to an Essex Chemical terminal in Baltimore, Md. Since the strike, Noranda has brought from three to five vessel loads of acid from Europe to service that terminal.

Pfizer Inc., a Noranda account at Groton, Continued on Page 30



CIL AT SAYREVILLE: The company brought one of its plants back on stream early because of the strike situation. The company acquired the twin facilities from NL some years back.

Pfizer Sugar Substitute Enters FDA's Pipeline

Pfizer, Inc. says it has submitted its entrant to the \$1 billion sugar substitute market to Food & Drug Administration for regulatory approval. The sweetener, altame, is 2,000 times sweeter than sugar, Pfizer says, and has none of the negative side effects linked to aspartame, G.D. Searle & Company's hugely successful sugar substitute.

Pfizer says its filing petition was accepted by FDA on August 21. The company would not project when the food additive would reach the market, but one security analyst noted that based on the experience of other sweetener substitutes, the approval process could take up to five years.

Altame was discovered by Pfizer scientists at Groton, Conn. in 1979. The compound is a dipeptide-based amide, with the dipeptide portion formed from the amino acids L-aspartic acid and D-alanine. The sweetener differs from aspartame in that it uses

D-alanine rather than L-phenylalanine.

High blood levels of phenylalanine have been linked to a condition called phenylketonuria, which when contracted by pregnant women can cause brain damage to the fetus. However this charge has not been conclusively proven.

Pfizer also says altame has superior stability to aspartame and won't encounter the shelf life problems associated with products containing "NutraSweet," Searle's brand-name for aspartame. The company also says altame's heat stability will enable it to be used in baked goods, which a security analyst calls the sweetener "largest market potential."

Despite these apparent advantages, sources say it will take three to five years before altame reaches the US market as a table top sweetener. One analyst says the controversy surrounding cyclamates, saccharin and now aspartame has made sweetener

Continued on Page 15

Hazardous Substance List Is Lengthened by EPA

Environmental Protection Agency has announced final reporting levels for 102 additional hazardous substances whose accidental spill or release into the environment must be reported to Federal emergency response authorities.

Under the superfund law, the Comprehensive Environmental Response, Compensation & Liability Act of 1980 (CERCLA), 717 hazardous substances require reporting to Federal authorities when spilled or released into the environment (air, land, surface waters, groundwater) at or above specified levels.

Reporting requirements for all 717 substances at levels specified by CERCLA have been in effect since the law was passed. The latest legislation formally re-establishes or adjusts the reporting requirements for 102 substances.

Spills or releases equal to or above the reportable quantity levels must be reported to the National Response Center. The NRC

will notify emergency response coordinators who will then determine what kind of action is necessary to alleviate any threat or potential threat to nearby populations or to the environment.

Under EPA's emergency response program, each of the agency's ten regions maintains emergency response personnel who are on call to respond to oil and hazardous substance emergencies. The US Coast Guard also maintains 12 district offices and other units to respond to oil and hazardous substance emergencies.

The law requires reporting by persons in charge of a facility or vessel from which substances are released into the environment at amounts of one pound or above, with the exception of higher amounts for some substances which were established earlier under the Clean Water Act (CWA) for spills into waterways.

NRC must be notified immediately upon discovery of such a release. If the release has

Continued on Page 25

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- Perketals (Lupersol 231, 233) for use in continuous bulk polystyrene.

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- Initiators for high solids acrylic coatings (Lupersol 533).

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News Capsules

NL Shifts Management

NL Industries said last week that Fred W. Montanari, executive vice-president, will become president and chief operating officer of NL Chemicals, succeeding John R. Slowik, who is leaving to pursue other interests, according to NL. The change is effective immediately. NL, effectively under the control of Texas financier Harold C. Simmons, has agreed to seek a buyer for its chemicals business or spin it off to shareholders.

Cal. Biotech Signs Accord

California Biotechnology Inc. has signed letters of intent to form two joint ventures in veterinary therapeutics and related products with Ft. Dodge Laboratories Inc., a subsidiary of American Home Products Corporation. The first venture covers development of products to treat various pet diseases and the second will pursue development of a contraceptive vaccine for animals, mainly dogs and cats.

Ruckelshaus Signs On

William D. Ruckelshaus, former administrator of the Environmental Protection Agency under presidents Nixon and Reagan, has agreed to be the advisor for environmental health issues to the National Safety Council. Mr. Ruckelshaus will serve as a consultant and later will chair the advisory group for an environmental safety and health institute when it is established.

Biogen Venture Set

Organic Plus Company and Natural Systems Company have signed a letter of intent to form a joint venture to produce and market biogen in New Jersey. Biogen is an ingredient used in clinics to prevent baldness and stimulate new hair growth. The new venture, Organic Plus, will construct a 1-million-gallon-per-year plant in New Jersey and will begin production in the second quarter of next year.

Cyanamid & Iowa Agree

American Cyanamid Company and Iowa Limestone Company have completed their agreement for Iowa Limestone to purchase Cyanamid's calcium carbonate deposits, mining and ore processing equipment at Alden, Iowa, and Weeping Water, Neb. Terms of the transaction were not disclosed.

New Software System

Aqua-Tech Inc., Port Washington, Wis., has introduced an emergency response computer software system, called "Chemdata", designed to provide fast and accurate information for response to chemical spills and emergencies. The system contains information on over 18,000 chemicals and 44,000 synonyms.

'Prowl' Packaging Touted

American Cyanamid Company claims the yellow plastic packaging of its "Prowl" herbicide gives the product an advantage over the competition. The bright yellow, five-gallon high-density polyethylene container "differentiates our product from others," the company contends.

Chevron, ICI in Accord

Chevron Chemical Company and ICI Americas Inc. have reached a tentative agreement to terminate Chevron's rights to distribute paraquat in the U.S. Chevron's Ortho Agricultural Chemicals Division has marketed the non-selective herbicide here since 1986 as ICI's licensee. ICI Americas has also sold paraquat in the U.S. for the last two years under the trade name "Gramoxone." ICI discovered the product over 25 years ago.



DU PONT IN TEXAS: The company is one of a number expected to benefit most in current climate.

TFI Rebutts Use Of Coal Rates To Figure Prices

Interstate Commerce Commission guidelines to determine rail rate reasonableness for coal shipments should not be applied to non-coal commodities, according to The Fertilizer Institute.

The institute argued that the use of a stand-alone cost standard — the fundamental concept for coal rate guidelines — is inappropriate for fertilizer movements.

"A competitive access remedy — requiring rail carriers to publish through-routes or joint rates, reciprocal switching charges or terminal trackage rights — is the best means of resolving the captive shipper dilemma," said institute president Gary D. Myers in comments submitted to the ICC.

As defined by the commission, the stand-alone standard finds a rate to be reasonable if it falls below a hypothetical rate required to provide comparable service to captive shippers.

The institute's comments maintained that such a methodology is inappropriate for fertilizer movements.

ICI NH₂ Process To Be Used In PRC Facility

ICI's AMV ammonia process is to be used in a new 1,000-metric-ton-a-day ammonia plant to be built in the People's Republic of China. The project, for the Zhong Yuan Fertilizer Plant at Puyang, Henan Province, attracted bids from the world's major ammonia process companies.

The process, according to the company, is regarded as one of the most energy efficient, costs less to build and is extremely reliable in operation.

Canadian Industries Ltd. built the first plant to use ICI's AMV technology. This 1,120-ton-a-day unit was commissioned in August last year.

The contract to build the new Chinese plant has been won by Urdet of Dortmund, Germany, a licensee of the AMV process, which also engineered the C-L plant.

The AMV process was developed by ICI Agricultural Division at Billingham, Cleveland. Bob Coxon, Division Licensing Manager, commented, "We are delighted with the news."

Chemical Income Seen Rising 22 Pct. in 1987

The US chemical industry should increase its operating earnings by 22 percent in 1987 following a projected gain of 35 percent in 1986, according to a study of the industry by analysts at Drexel Burnham Lambert Incorporated. Companies likely to gain most by the strong earnings climate are said to be Imperial Chemical Industries, Ltd., Dow Chemical Company, Air Products & Chemicals, Inc., Rohm and Haas Company and Morton Thiokol Corporation.

At Shearson Lehman Brothers, a subsidiary of American Express Company, analyst Theodore S. Semegran, sees an improving chemical trade balance as the industry's insurance against slackening of economic growth in 1987.

The optimism is based on continued strength in housing, automobiles and other major consumer markets, but on this subject, Henry Kaufman, chief economist at Salomon Brothers, Inc., is warning that the US debt problem — mortgage debt, corporate debt, private debt and national debt — is getting out of hand.

In a talk before a symposium sponsored by the Federal Reserve Bank of Kansas City in Jackson, Wyo., Mr. Kaufman warned that the US financial system will need structural

changes and new disciplines "if an economic disruption of major proportions resulting from the debt problem is to be staved off."

Among other recommendations, Mr. Kaufman said that tax policy should favor equity over debt; regulatory bodies should, in some cases, rate the credit of financial institutions; centralized monitoring and regulation of the financial system should be established; reporting of contingent liabilities should be required and financial institutions should have to report their assets cost or market value, whichever is lower.

Mr. Semegran, of Shearson Lehman, said that for the next six months, US chemical companies' earnings will remain strong due to the large energy price drops, favorable foreign currency translation effects and the restructurings that were undertaken in 1985. As the effects of these factors ease in 1987, improved trade "will be the likely savior," Mr. Semegran said.

The tendency this year is for exports to increase, Mr. Semegran comments, and some of the big gainers will be amines, bisphenol-A, terephthalic acid, isopropanol, polypropylene glycol, butyl acrylate and related compounds.

Declining exports and increasing imports of low-density polyethylene this year, the analyst said, probably reflect a developing

Continued on Page 17

Acids to Aid Butchers

US Department of Agriculture is seeking comments on an interim final rule that will permit the controlled use of substances that maintain the color of fresh port cuts for the duration of their normal, safe shelf-life. The substances are ascorbic acid, erythorbic acid, citric acid, sodium ascorbate and sodium citrate. The interim final rule becomes effective Sept. 22.

"Fresh pork cuts lose their color long before they become unsafe to eat, and some consumers find the off-color less desirable," said Donald L. Houston, administrator of USDA's Food Safety & Inspection Service. "We have reviewed data which indicate that certain acidic substances can safely be used to extend the

color and appearance of fresh port. In addition, the prescribed conditions under which the substances are permitted will ensure they do not mask signs of food spoilage."

According to Mr. Houston, modern processing technology makes it possible for processors to very precisely control their operations, including the stages where substances are added to meat.

Only processors operating under a USDA-approved partial quality control program will be allowed to use the substances, he said. Under these programs, plants establish controls at certain processing steps. USDA inspectors monitor the plant's controls and data to ensure the process is operating correctly.

Schering Pursues Cases Against Alleged Imitators

In its continuing campaign against manufacturers of generic drugs Schering Company last week filed suits against such producers in three states to enjoin them from selling their products with labels that allegedly simulate the Kenilworth, N.J., company's packaging and graphics.

Schering filed the suits to protect its "Afrin" nasal decongestant spray, its "Chlor-Trimeton" and "Polaramine" antihistamines and its "Tinaclin" athlete's foot remedy.

A suit against Life Laboratories, Inc., Sun Valley, Calif., involves the alleged simulation of the packaging colors and graphics of "Afrin" and "Tinaclin." This suit was filed in District Court for the Northern District of California in San Francisco.

A suit against MY-K Laboratories of Skokie, Ill., formerly known as Bay Laboratories Inc., also involves the label colors and graphics of "Afrin." In addition this suit charges MY-K with infringing Schering's trademark "Polaramine" by the use of the trademark "Bylaramine" for a directly competitive product. The suit against MY-K was filed in the US District Court of Illinois, Rockford Division.

Schering's third suit, against Certified Pharmaceutical Laboratories of Largo, Fla., and Jewett Drug Company of Aberdeen, S.D., involves the simulation of the packaging colors and graphics of "Chlor-Trimeton." It was

filed in the US District Court for the Middle District of Florida, in Tampa.

Schering says it is seeking permanent injunctions prohibiting the defendants from continuing to supply their products with packaging that simulates Schering's, from simulating or infringing its trademarks and from "otherwise unfairly competing."

The company is also seeking treble damages, the recovery of the defendants' profits, and awards of attorneys' and legal expenses.

The filing of these suits follows recent consent judgments that Schering obtained against various defendants for label simulation, trademark infringement, false and misleading advertising and other acts, many of them involving the company's diet aid "Fiber Trim."

Among the defendants that have signed consent decrees are Thompson Medican Company (New York City); Vita-Fresh Vitamin Company (Garden Grove, Calif.); Fiske Industries Inc. (New City, N.Y.); Great Life Laboratories (Westford, N.J.); NMC Laboratories (Glendale, N.Y.); Perrigo Company (Allison, Mich.); Newton Pharmaceuticals Inc. (Bohemia, N.Y.); Pennex Products Company (Verona, Pa.); Gentex Corporation (Cincinnati, Ohio) and Simpax Corporation (Seattle, Wash.).

A spokeswoman says the company is extremely active in defending its products against these sorts of infringements.

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OILS, FATS & WAXES

P&G's Canola Venture Roils The Vegetable Oil Industry

Procter & Gamble's announcement that it is using canola oil in its "Puritan" vegetable oil is focusing industry attention on the low erucic acid variety of rapeseed.

"Every major oil processor in the country is looking at it," says one industry source. The processors have "all got canola in their research facilities," he says.

One of the main reasons for the interest is the oil's low saturated fat content. "Puritan" oil, now 100 percent canola, contains 6 percent saturated fat, according to a Procter & Gamble spokesman. Improved nutritional value was the motivation for the switch from the previous blend of 80 percent sunflowerseed oil and 20 percent soybean oil, the spokesman adds.

Another attractive feature of canola, which was approved for edible use in the US in January of 1985, is that crushing yields 60 percent oil and 40 percent meal, a higher oil yield than that of soybeans.

Canola's use as a fatty acid feedstock has also garnered it attention from people in the chemical business. While looking for a high-yield feedstock last year, one industry source began buying canola oil. He calls the 90 percent stearic feedstock "very desirable" compared to soy in terms of "economics and quality," he says.

HIGH OLEIC SOURCE

Canola is also a sought-after source of high oleic material, according to a trader. His sales of canola to non-food customers are up 100 percent over last year's sales, he claims.

Canadian government subsidies on transportation of the oil to the East and West coasts of the US help make it a competitive alternative to soybean oil. Canola oil, generally priced in the 18 cents to 20 cents range, is "a growing threat," according to a soybean oil processor. In his view, the extent of canola's use in the US will depend largely on the success of a few products made here with the oil, including "Puritan."

Another trader feels that use of canola in the US will not become widespread for "a couple of years," and that the 8 percent duty on the imported oil will keep some customers away.

A major US oilseed processor is currently looking into the possibility of crushing canola for the domestic market as early as next July. The "major impetus" for this "experiment" is, says a source from the processing company, the use of canola oil by Procter & Gamble.

At this point, he says, his company and the

rest of the industry are waiting to see how the American public will respond to the oil, and to the claims made for its health benefits, before pressing ahead with plans for crushing. Canola's similarity to linseed makes flax crushing equipment, with slight modifications, ideal for crushing canola, the source says.

Canola is currently grown in the Pacific Northwest and at a few other locations in the US, but not enough to supply the US market's needs. The winter canola that they grow, harvested in the Spring and Summer months, is mostly sold to Canada for crushing.

"Up to now," says Marlene Peters, president of Mid-American Oil Seeds Association, "there hasn't been adequate US demand to justify planting here." She cites the hardships facing US farmers as a deterrent to gambling on growing a new crop without a well-established market to sell to. Some growers be-

PRICES TRENDLINES

WEEK ENDING AUGUST 29, 1986

CHANGES/UP

Soybean oil, Decatur \$30 per ton

CHANGES/DOWN

Cottonseed, 41% bulk, Memphis, \$7.50 per ton
Cottonseed oil, Valley, 1c. per lb.
Lard, loose, bulk tanks, Chicago divd., 1c. per lb.
Palm Oil, 1/2c. per lb.
Peanut, 50% bulk, SE, \$10 per ton
Peanut oil, Southeast (restricted), 1c. per lb.
Soybean, 44% bulk, Decatur, \$7.50 per ton

OILS, FATS INDEX

The Oils, Fats & Waxes Index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Aug. 22, 1986 83.06
Aug. 16, 1986 79.80
July 25, 1986 84.54
Aug. 23, 1985 83.98

Chemical Prices Start on Page 34

FRIDAY SPOT PRICES

MARKET CLOSE AUGUST 29, 1986

CRUDE VEGETABLE OILS

Coconut oil, NY lb. .12 1/4
Coconut oil, Pacific lb. NA
Corn oil, Midwest lb. .18 1/2
Cottonseed oil, Valley lb. .13 1/4
Linseed oil, Minneapolis lb. .28
Palm oil, NY lb. .11 1/4
Peanut oil, Southeast (restricted) lb. .29 nom
Soybean oil, Decatur lb. .1380

REFD. VEGETABLE OILS

Coconut oil, t.w., NY lb. .18
Corn, jumbo tanks lb. .24 1/4
Cottonseed oil, jumbo tanks, NY lb. .2348
Peanut oil, jumbo tanks, NY lb. .37 nom
Soybean oil, NY lb. .1803

OILMEALS

Cottonseed, 14% bulk, Memphis ton \$117.50
Linseed, extracted, 54% bulk, Fargo ton \$100
Peanut, 50% bulk, SE, Alabama ton \$185
Soybean, unrefined, 44% bulk, Decatur ton \$174

FATS & GREASES

Grease, white, choice, tanks, divd., NY lb. .9 1/4
Grease, yellow maximum 10% fat tanks lb. .8 1/4
Lard, loose, bulk tanks, divd., Chicago lb. .14
Tallow, inedible, tanks, divd., NY lb. .10
Tallow, inedible, bulk, tanks, divd., NY lb. .9 1/4

lieve that if American farmers were to be educated about canola, they would find it an attractive winter rotation crop.

The sunflowerseed oil industry is keeping a watchful eye on developments in US raising of canola. The sun oil producers were "taken by surprise" by Procter & Gamble's decision to use canola in "Puritan," which had previously been a blend dominated by sunflowerseed oil, according to a sun oil processor.

Although there is concern in the industry over canola's high oleic content, which is a prime selling point of sun oil, producers are confident that the quality of their material is at least as great as that of canola, the source says.

Exports of canola from Canada, the main US source of the oil, almost doubled in the Jan.-May period of 1986 as compared to the same period in 1985.

The total canola exports from Canada to the US for 1985 were 245,228 metric tons (MT), representing 7.8 percent of Canada's total canola exports for that year. The US imported 8,136 MT of canola oil from Canada in the Jan.-May 1986 period. Other major importers of canola include India and Japan.

Canola, Canada's number one source of vegetable oil, is also considered a desirable source of meal, due to its low levels of glucosinolates.

VEGETABLE OILS

COCONUT OIL: — Traders last week saw a flurry of high-level trading in the coconut oil market. Traders were at a loss to fully explain the firming in the market beyond say-

白熊牌



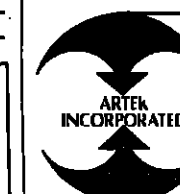
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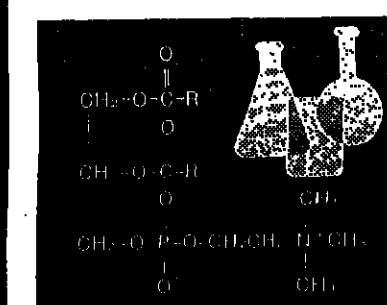
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OILS, FATS & WAXES

ing that it was just one of the occasional "bleeps" that they have seen in the market over the past few months. Covering of short positions probably was involved with the rise, sources say.

After the three day period of heavy activity was over, the market returned to its lower levels, with most of the activity in Dec-Jan. positions. Buying interest "evaporated" after the brief rise, says a source, who points out that the spot market saw very little activity during the week. Seeing nothing to sustain the market at higher levels, traders remain unconvinced that the market has yet hit bottom.

OLIVE OIL — A measure awaiting Congressional approval would lower the tariff on olive oil coming into the US, according to a US government trade source. The measure would reduce the duty on containers greater than 40 pounds from 3.6c. per pound to 1.86c. per pound. The duty on olive oil in containers smaller than 40 pounds would be lowered from 3.6c. per pound to 2.28c. per pound.

The proposed move represents an attempt to accommodate the European Community, with whom the US has been having trade difficulties involving US citrus and European Community pasta, according to Foreign Agriculture Service.

The measure is expected to win approval when Congress re-convenes after its current break.

The reduction would lower the high spot prices that traders are seeing now, sources say. The current price is being called \$8 per gallon for Spanish Riviera and Virgin grades, and \$5.35 per gallon for Italian B material.

The market is very quiet right now, with stiff prices not expected to change until after August, a primary holiday time in Spain.

PEANUT OIL — Recent rains in the Southeast improved the outlook for the current peanut crop. Traders are now thinking of the crop reduction as considerably less serious than they had been before. They are now comfortable with the USDA's estimate of a 15 percent reduction from last year's crop, rather than figures nearly twice that they had been fearing, sources say.

Perhaps partly because of this, trading on peanut oil has been very slow. Prices have also softened, and are apparently continuing to do so, as buyers are staying away from the material at the asking levels.

The lack of any significant export trade, adequate supplies, and increased buyer confidence in availability are all helping to soften the market. "Prices won't soar like people thought they would," says a source, who notes that although the rains may have come too late for some of the crop, traders are remaining optimistic about the nuts that

OILS, FATS & WAXES

will begin coming to market in two to three weeks.

SOYBEAN OIL — Traders were pleased to see a pickup in foreign buying interest, as importers abroad continue trying to use up their Commodities Credit Corporation credits before the end of September.

Bangladesh has been tendering on 8,000 tons of crude de-gummed soybean oil in barrels, industry sources say. Originally, Bangladesh's interest in soy oil "came on the heels" of a PL 480 sale to Haiti, a source says. The US government put Bangladesh on hold until now to prevent the soybean oil market from getting too tight, according to an industry source.

The Dominican Republic is also said to be coming in for a purchase in the near future.

At home, soy oil is seeing very little activity, as the crush continues to be meal-driven.

A remark by Agriculture Secretary Lyng regarding off-grade soybeans being held by the government softened the market as crushers expected the material to go to the market sometime soon, a source says.

FATS & GREASES

TALLOW — The tallow market is experiencing a pickup in orders from foreign buyers anxious to use up their Commodities Credit Corporation credits before the September 30 deadline, sources say.

West Coast traders have been finding an increase in Korean buying, and other parts of the US are stepping up shipments to Europe in response to their heightened demand, according to industry sources.

It had been hoped that Egypt would order a large quantity of US material last week, but the Egyptians have delayed their decision until at least this week, a source says. They are said to be planning to purchase 25,000 tons of material, but it is not certain if they will decide to buy tallow or coconut oil.

Domestically, tallow availability is tight, partly because the chemical business has been buying steadily lately, and is expected to continue doing so, sources say.

In response to this and to the improvement in export activity, sellers raised their prices last week. They are said to be having a hard time finding customers to buy at the higher levels, though, and probably will not be able to maintain the higher prices in the face of a weak vegetable oils market.

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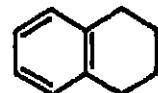
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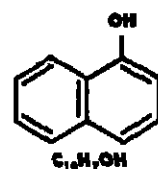
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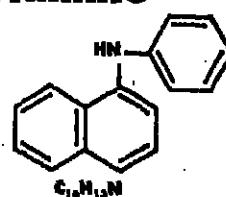
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AROMATIC ORGANICS

Maleic Anhydride Market Called Fairly Snug by Analysts

Following an "unusual" first half of the year for maleic anhydride, producers say that healthy domestic demand is keeping the market fairly snug. Ashland Chemical Company experienced difficulties with a reactor early in the year that resulted in some loss of production from its 80-million-pound-per-year facility in Neal, W. Va. "We ran the other reactor heavily," and drew down inventories, says a company spokesman, in order to meet delivery schedules.

USS Chemicals, a division of U.S. Diversified Group, lost output from its 33-million-pound-per-year facility in Neville Island, Pa. for approximately ten weeks following a fire April 11. The company worked off inventory and "made arrangements to supply customers," according to a company spokesman.

He says the outage "was very untimely... (as it) came at the height of the market's demand." This reflected the seasonal upturn in the agricultural chemicals sector; demand from the other major end markets is said to be considerably less seasonal.

With the production problems in the industry during the first half of the year, says a producer, "inventories began to dwindle a little bit. Producers are still running full out to replenish inventories," but this is no easy task given healthy demand and seasonal turnarounds such as that taken by Monsanto Company's 170-million-pound-per-year Pensacola, Fla. facility for the month of August and Denka Chemical Corporation's 50-million-pound-per-year plant in Houston during July.

MALEIC SUPPLY SNUG

"Nobody has run out of maleic, but it has been snug," says a producer. Demand for polyester resins, which accounts for about half the market, was approximately 2 percent stronger during the first half of the year compared with the same period of 1985, according to Society of Plastics Industry. This rate would lead to a demand growth of about 4 million pounds annually.

Producers agree that the polyester resin business has been reasonably healthy and that the smaller, more mature end markets — lube oil additives, fumaric acid, and agricultural chemicals — have been holding steady. Producers see polyester resin demand continuing to grow at a GNP-style pace, or slightly higher, for the foreseeable future.

However, this growth has been more than offset this year by a fallback in export levels. Last year, when Monsanto's plant in Wales U.K. underwent a catalyst change, the company's Pensacola, Fla., facility boosted its shipments to Europe. With the Wales plant back this year, the US export level is expected to be only about half last year's 27 million pounds.

Producers say they have observed no real effects of the US dollar's weakening on export interest, and expect the export level to be flat for the next couple years. Main markets are said to be Canada, Latin America, Southeast Asia, and Australia.

Monsanto's curtailment of exports, USS's outage, and Ashland's operational difficulty are seen as contributors to an 8 million pound decline in production, from 181 million pounds during the first half of 1985 to 173 million pounds during the first half of 1986, according to International Trade Commission.

Producers say that list pricing is at 53 cents per pound. Market prices are said to have been holding steady in recent months, with discounts of between 5 and 10 percent off list. Producers acknowledge that feedstock butane costs have been weak, but observe that from the late 1970's until the mid-1980's, the maleic anhydride business was not a profitable endeavor.

With demand projected to exceed current

capacity by 1990, expansion plans are in evidence. Denka says it will be on-stream with an additional 20 million pounds per year during the first quarter of 1987, and Monsanto plans to add 40 million pounds per year by early 1988. USS Chemicals says it is "looking at ways to optimize our business," and Ashland says its plant is capable of being expanded.

PRICE HIGHLIGHTS

AROMATICS IN AUGUST

	CONTRACT (US\$)	SPOT (US\$)
Aniline.....lb.	33-35 1/2	34-35
Benzene.....gal.	70-75	69-77
Cumene.....lb.	13 1/4-13 1/2	13 1/4-13 1/2
Cyclohexane.....gal.	777	NA
Phenol.....lb.	22	19 1/2
Styrene.....lb.	18	17-17 1/2
Toluene.....gal.	67-73	66-7
Xylenes, mixed.....gal.	50	75-3

panded and the situation is under evaluation. Producers note that Standard Oil Company has shown an interest in using maleic anhydride for 1,4-butanediol production that could bear fruit in two to three years.

BTX — Exxon Chemical Americas and Shell Chemical reportedly are raising benzene contract pricing 5c. per gallon, to 80c. per gallon, effective September 1. While most other suppliers are believed to be following the upward adjustment, Standard Oil is raising its contract pricing by 10c. per gallon, to 85c. per gallon.

A Standard Oil spokesman says that, because the company "does not agree with a twice-a-month adjustment" policy, it has "taken the bull by the horns" and made its posting based on an assessment of the strength in the benzene marketplace.

A contributing factor in the decision, the Standard Oil spokesman says, is the company's hydrodealkylation (HDA) capacity at its Lima, Ohio and Alliance, La., facilities. At the present time, industry sources say, no merchant HDA units are in operation.

Standard Oil's HDA potential is being evaluated, the company spokesman says, while observing that "HDA economics are still not validated at 80c. per gallon." A trader comments that 85c. per gallon "is the kind of number you need for HDA."

Spot benzene is said to be in a firm 76c. to 77c. per gallon range, while spot toluene is quoted between 66c. and 67c. per gallon. Crude oil and gasoline prices are strong, and these are providing much of the upward pressure on basic aromatics pricing, industry sources say. In addition, it is observed, octane enhancer demand in Europe has been strong enough to draw toluene and MTBE shipments from the US.

Spot xylene is quoted at 72c. per gallon and the market is described as tight. Paraxylene contract pricing is said to be holding steady at 19.5c. per pound. Orthoxylene contract pricing has firmed up during the past couple months to between 18c. and 13 1/2c. per pound.

CUMENE — Contract pricing, quoted between 13 1/4c. and 13 1/2c. per pound in August, will likely be firming up to the 14c. per gallon level in September in response to higher benzene prices, producers say.

"Cumene prices have been fairly low... (and) we have been seeing fairly good demand," one producer comments. Another producer says that, in addition to domestic demand, inquiries have been received recently from Eastern Europe. According to Bureau of Census, the amount of cumene exported in June was the largest since January 1985.

CYCLOHEXANE — In response to the 5c. per-gallon benzene contract increase, cyclohexane pricing moved up 4.1225c. per gallon

AROMATICS

In accordance with the industrywide pricing formula. Prices range from Phillips Chemical Company's 93.6450c.-per-gallon price to Texaco Chemical Company's 92.6450c.-per-gallon price.

DYES — Food & Drug Administration says it intends this Fall to permanently list Yellow 6, Red 8, and Red 9 as safe for use in externally applied drugs and cosmetics. A provisional listing will be in effect until October 6.

PHTHALIC ANHYDRIDE — BASF Corporation says it is presently starting up its flaking and bagging system adjacent to the company's 175-million-pound-per-year molten phthalic anhydride plant in Kearny, N.J.

BASF has been supplying flaked material to the East Coast market from its Cornwall, Canada facility. USS Chemicals, a division of U.S. Diversified Group, supplies the market from its Neville Island, Pa. facility, which flakes material brought in from a 210-million-pound unit in Pasadena, Tex.

The Kearny startup "certainly will increase the competition," observes a USS Chemicals spokesman, who sees the facility as effectively replacing Monsanto Company's 80-million-pound unit in Bridgeport, N.J., which was closed in January.

A BASF spokesman says that "we had a very minor position" in the East Coast market while bringing in material from Canada, and "we are now looking at a much more extensive position." The company says that the ability to maintain inventory locally will improve the logistics of its operation.

In addition to USS Chemical's presence, BASF will need to contend with imported product. "The East Coast has been plagued by cheap imports," says the USS Chemical spokesman, which have come from such countries as Brazil and Venezuela.

Imports during 1985 totaled approximately 12 million pounds, and took 14 percent of the US flake market. Through the first

six months of 1986, imports totaled approximately 9 million pounds for an estimated 21 percent share of the US flake market.

Nonetheless, it is observed that the volume of imports has tailed off recently, attributed to strong demand from the Far East and the devaluation of the US dollar. According to Bureau of Census figures, the amount of material imported during May and June combined was 1.270 million pounds, while the average import level for the first four months of the year was 1.949 million pounds.

STYRENE — Amoco Chemicals says that it is removing a 1c. per pound temporary voluntary allowance from its list pricing, effective September 1. The new price is 21c. per pound, f.o.b. Texas City, Tex., with higher prices from other shipping points. Other producers have raised prices by 2c. to 3c. per pound.

Pfizer Sugar

Continued from Page 7

ers "an extraordinarily hot topic." He says the burden of proof on Pfizer to prove allitame's safety and efficacy is "enormous." He concludes that the product has "a lot of potential," but it will "take a long, long time" to get through the approval process.

Allitame is hitting the regulatory pipeline at a time when competition in the sugar substitute market is soon to heat up. Aspartame's current hold on the market is very strong (\$750 million in sales, compared to under \$100 million for saccharin), but several observers say cyclamates may re-enter the market next year, 17 years after the FDA banned them.

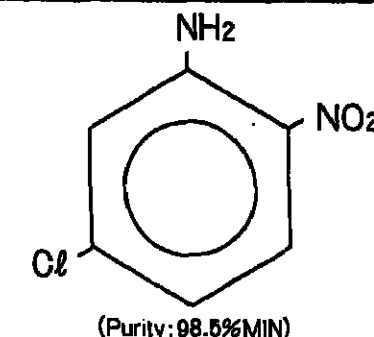
In addition, another sugar substitute that was submitted for FDA approval in 1982 continues to move through the approval process. The sweetener, called acesulfame K, was developed by Hoechst AG and is already marketed in several Western European countries.

Pfizer says allitame's stability will enable it to be used "in a wide variety of foods, including beverages and baked goods." The company says allitame can also be used in toiletries and pharmaceuticals.

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S' Fund Tax Increase

Continued from Page 5

held together since then through interim financing.

While the chemical industry has supported reauthorization of superfund, Chemical Manufacturers Association, the industry's trade group in Washington, has urged Congress not to increase feedstock taxes beyond past levels. CMA appears to have succeeded.

"I think there's a pretty good understanding in Congress that petrochemical feedstocks can't take much more," says Tom Gilroy, a CMA spokesman. "They just look at Texas and Louisiana where most of the tax is collected. It's not a healthy segment of the industry."

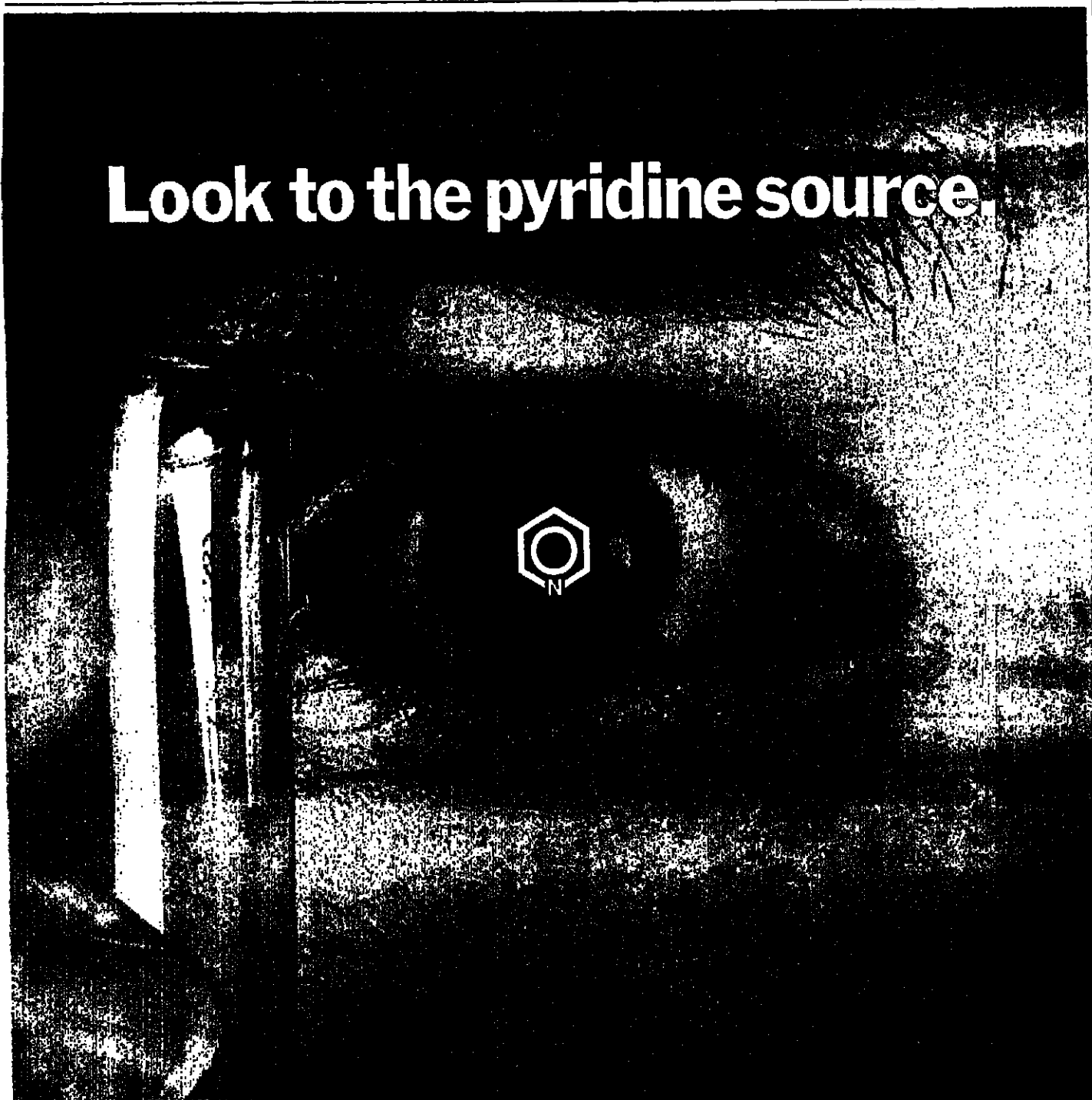
A staff member of the tax-writing House Ways & Means Committee credits CMA with doing a "good sale" on the feedstock tax issue, agreeing that feed taxes will probably be frozen at past levels. However, she says there is no consensus on even a broad outline of how the new cleanup program should be funded. CMA supports some sort of broad-based

tax to pay for waste-site cleanups, but the issue is "still up in the air," the Ways & Means staffer says, as is agreement on some sort of waste end tax. "That's just as controversial," the aide observes. The House bill contained a waste end tax, while the Senate bill included a broad-based tax.

The Reagan Administration, meanwhile, has threatened to veto any superfund bill containing a broad-based tax or a "substantial" increase in feedstock and petroleum taxes. This position has raised concern both in the chemical and petroleum industries.

The Reagan Administration has consistently opposed a broad-based superfund tax. In the Spring of last year, when the Senate Finance Committee was considering various broad-based tax schemes to finance an expanded superfund, the Treasury Department testified that it would rather see an expanded superfund program financed by higher feedstock prices than a broad-based tax (CMA 4/29/85, pg. 3).

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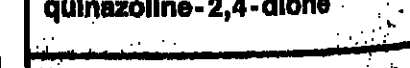
3,4-Dimethoxyaniline
4-Aminoveratrole



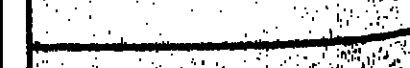
3-Nitro-p-toluic acid
and other isomers



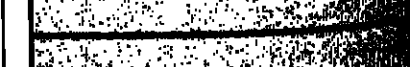
6,7-Dimethoxy-
quinazoline-2,4-dione



4-Aminoacetophenone



5-Nitroisophthalic acid
and derivatives



4-sec-Butylaniline
and 2-sec-Butylaniline



4-sec-Butylaniline
and 2-sec-Butylaniline



4-sec-Butylaniline
and 2-sec-Butylaniline



4-sec-Butylaniline
and 2-sec-Butylaniline



Chemical Earnings Rising

Continued from Page 9

shortage of LDPE in the US rather than declining competitiveness of US producers. A similar trend in polyvinyl chloride could also be the result of limited capacity, he comments.

Drexel Burnham Lambert's chemical team — William R. Young, Katharine L. Plourde, Brian J. Corvase and Charles A. LoCastro — are forecasting real growth of 3.2 percent in the US GNP next year with a slight bulge in the fourth quarter.

The Drexel Burnham projection for chemical industry revenue growth in the current year is 3.4 percent, with physical volume expected to grow about 5 percent, while selling prices decline by no more than 1.5 percent. Operating earnings are expected to be up 85 percent, versus a previous forecast by the team of 24 percent for the year.

EXPORT VOLUMES

The Drexel Burnham Lambert team also is expecting the industry to increase its export volumes and reduce imports. Other expected stimulants to earnings include a pick-up in capital spending, a steadying of the oil price somewhere in the mid- to upper teens, a continuing steady trend in fixed costs, along with better supply/demand balances. An industry operating rate in the vicinity of 85 percent is forecast by the analysts for 1987.

The four analysts remain optimistic on the outlook for industrial chemicals, "for which capacity reductions have become a way of life in recent years, and for the major thermoplastics, among which tightness in availability will be most evident in the polyethylenes and polypropylenes."

Man-made fiber gains, however, are seen limited by continuing imports of textiles and

apparel and by the upcoming drop in cotton prices, "which could discourage the use of polyester and other man-made yarn goods."

Prospects for the industrial gas manufacturers are said to remain healthy despite a recent wave of announcements of proposed new capacity.

"Demand and operating rates for the important merchant gases continue to trend upward, approaching the 'sold-out' 85 percent operating rate domestically," the analysts said.

In the absence of a recession, the net additions to merchant industrial gas capacity likely to come on stream during the next two years "should be absorbed by the expected demand growth for these products in the same time period," the Drexel Burnham Lambert analysts stated.

The herbicide outlook is said to be good for those companies which are commercializing value-added products. The prospects are said to be best for American Cyanamid Company's "Scepter," Dow Chemical's "Tandem," Du Pont Company's "Classic," "Du Pont's "Assure," Dow's "Verdict," and Imperial Chemical's "Reflex."

Losses in market share are expected for Rohm and Haas' "Blazer," BASF Corporation's "Basagran," Du Pont's "Lexone," Bayer Chemical's "Sencor," and Monsanto Company's "Lasso."

In the specialty chemicals area, Drexel Burnham Lambert expects the best gains to be registered by Pall Corporation, Avery International, Inc., and the specialty operations of Morton Thiokol. Equities of all three companies are rated "buy" as are those of the previously mentioned companies.

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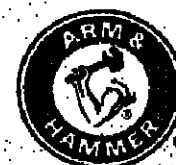
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ALIPHATIC ORGANICS

VCM Rates Rise

Continued from Page 3

in advance," says one producer, "planning problems can be created." "On a long term basis the industry is not over committed but, on a short term basis, there are problems."

In addition, occasional operating problems are exaggerated under such high production rates. Earlier this year B.F. Goodrich reportedly declared a force majeure when an unexpected one week shutdown at its billion-pound-per-year La Porte, Tex., facility forced it to fall below supply obligations.

While demand has been strong, selling prices have been off about one to two cents per pound from first quarter levels. Current settlements for July are at about 15 cents per pound. Export prices, aided by weak dollar values, are currently about half-a-cent higher than domestic settlements.

BRAKE FLUIDS — Dow Chemical U.S. says it will increase the off-list prices of its brake fluids by 25c. per gallon October 1. The increase affects all bulk and private label packaged brake fluids.

Major components of these proprietary blends are glycol ether higher and glycols.

Current bulk list prices include \$4.90 per gallon for "BF brake fluid 470," \$5.40 per gallon for "BF brake fluid 920," \$4.40 for "BF brake fluid 1000," and \$5.20 per gallon for "Brake Fluid HD-50-4."

The above price are f.o.b. Freeport, Texas, freight equalized. Drummed quantities are 60c. per gallon higher.

BUTADIENE — Butadiene prices, continuing their year-long slide, lost about one half cent per pound during August. Selling levels have reached as low as 12 1/2c. per pound according to industry sources. Says one producer, "one would have thought that 13c. per pound was the bottom, but I've seen spot quotes below that."

Some marketers feel that the rapid decline in butadiene prices this year may have been aided by the popularity of MTBE in octane improvement and a "reasonably strong" gasoline demand this summer. "People may be moving butadiene in order to make isobutylene for MTBE," says one producer.

However, with crude oil prices showing renewed strength, September may be a watershed month for butadiene. One producer explains that consumers have, so far, been quick to point out that the decline in crude oil prices should be passed along in the price of butadiene. "When (oil) prices come up in September buyers won't be able to do that," says the source.

However, any increase in butadiene, motivated by higher oil prices, will be preceded by a "lag time" of at least 30 days according to producers.

EPOXY PRECURSORS — Dow Chemical U.S.A. says that it will raise the list price of its epichlorohydrin and allyl chloride by 3

cents and 6 cents per pound respectively on October 1. Epichlorohydrin will list for 88c. per pound on an f.o.b. basis. Allyl chloride will list for 71c. per pound. Dow will eliminate f.o.b. pricing on allyl chloride after October 1 and will sell the material on a delivered basis.

A Dow spokesman says that the price increases are needed in order to boost returns on the products, which have not seen a price increase for two and a half years. While Dow says that discounting is "not too widespread," it hopes that this move will replenish margins lost to recent price cutting.

Shell Chemical Company and Dow are the only domestic producers of epichlorohydrin.

PRICES TRENDLINES

WEEK ENDING AUG. 29, 1986

CHANGES/UP

None

CHANGES/DOWN

None

ALIPHATICS INDEX

The Aliphatic Organics Index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985.

Aug. 29, 1986 222.80
Aug. 22, 1986 222.80
Aug. 1, 1986 222.80
Aug. 30, 1985 203.80

Chemical Prices Start on Page 34

and allyl chloride. Dow has a 420-million-pound-per-year unit at Freeport, Tex. and Shell owns a 220-million-pound-per-year plant in Deer Park, Tex.

As of press time last week, Shell had no comment on Dow's price change.

EDTA — Dow Chemical U.S.A. says it will increase prices on all grade of its "Versene 100" plating agents by 3c. per pound on October 1. New prices will not exceed current list levels of 36.5c. per pound in bulk and 43c. per pound in drums. The above prices are f.o.b. Freeport, Texas, freight equalized.

ETHANOL — While sales of fuel ethanol showed only modest growth in July, prices showed a gain of 9c. per gallon on average over June values, according to Information Resources Inc. Strong premium gasoline demand, aided by lower prices and media promotions, according to IRI, have boosted demand for octane and made ethanol more attractive. During July there was a 14c. per gallon spread in fuel ethanol prices with the per gallon being the low point in Baltimore.

Continued on Page 20

ALIPHATIC ORGANIC OUTPUT: 2ND QTR. 1986

US INTERNATIONAL TRADE COMMISSION NUMBERS IN POUNDS.

	2nd Qtr. 1986	1st Half 1986	1st Half 1985
Acetic acid.....	787,353	1,494,180	1,281,171
Acetone.....	484,433	952,496	985,811
Acrylonitrile.....	147,829	285,215	332,841
n-Butanol.....	216,444	412,489	1,240,001
Butadiene (rubber grade).....	680,179	1,395,043	1,240,001
Carbon tetrachloride.....	185,761	303,938	303,938
Chloroform.....	116,630	205,131	205,131
Ethanolamines (mono, di and tri).....	122,582	277,983	277,983
Ethyl acetate (85 percent).....	84,288	164,433	164,433
Ethylene.....	8,081,043	16,114,894	16,114,894
Ethylene glycol, mono.....	1,088,485	2,319,507	2,319,507
Ethylene glycol, monoethyl ether.....	70,483	140,966	140,966
Ethylene oxide.....	1,490,490	2,921,040	2,921,040
2-Ethylhexanol.....	138,179	265,041	265,041
Fluorocarbon 11 and 12.....	182,402	364,804	364,804
Formaldehyde (37 percent by weight).....	1,537,070	3,074,140	3,074,140
Isopropyl alcohol.....	315,290	630,580	630,580
Methanol.....	1,823,123	3,646,246	3,646,246
Methyl chloride.....	101,353	202,706	202,706
Methylene chloride.....	130,853	261,706	261,706
Methyl ethyl ketone.....	127,550	255,100	255,100
Perchloroethylene.....	3,755,035	7,510,070	7,510,070
Propylene (chemical and polymer grade).....	379,584	759,168	759,168
Propylene (other).....	154,523	309,046	309,046
Propylene glycol.....	109,504	219,008	219,008
1,1,1-Trichloroethane.....	894,254	1,788,508	1,788,508
Vinyl acetate monomer.....	2,061,040	4,122,080	4,122,080
Vinyl chloride monomer.....			

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COATINGS & PLASTICS

Continued from Page 33

that a successful price increase should enable them to maintain these high operating rates.

PRIME PIGMENTS

CADMIUM PIGMENTS — So far, only one other domestic producer of cadmium red and yellow pigments has followed Harshaw.

THERMOPLASTICS

BULK PRICES IN AUGUST 1986

	AUGUST	JULY
	(US \$)	(US \$)
Polyethylene-LD, liner.....lb.	26-28	26-30
Polyethylene-HD, injection...lb.	26-28	23-27
Polyethylene-LLD.....lb.	26-30	25-29
Polypropylene, molding.....lb.	32-35	31-35
Polyethylene, g.p.....lb.	34-35	34-37
Polyvinyl chloride, pipe.....lb.	35-38	35-38

*Butene-1 comonomer.

Fillrol Partnership's move to increase list and selling prices.

SCM Pigments Division has announced that it will raise prices for its "Cadmolith" cadmium lithopone and pure cadmium reds and yellows by an average of 2 percent, effective September 15, 1986.

Prices for maximum volumes (orders of one ton and over) of representative products follow:

Yellow 300 "primrose yellow" will sell for \$3.03, Orange 340 "medium orange" for \$4.05, and Red 200 "light red" for \$5.37. In its "Modern" series, "Hi-brite yellow 600," "primrose Hi Brite" will sell for \$3.03 per pound, orange "840 medium High-brite" for \$4.05 per pound and red 201 "flame red," for \$5.37 per pound.

A spokesman for the firm explains that increased labor, raw material and operating costs have necessitated the increase.

Effective July 28, Harshaw-Fillrol increased selling prices for its cadmium sulfide, sulfoselenide and lithopone pigments by an average of 2 percent.

Use of these pigments in specialty engineering polymers and alloys is said to be growing; demand is expected to reach 6 million pounds this year (CMR, 8/11/86 p. 30).

Ciba-Geigy, Johnson Matthey, Ferro

Corp., the remaining 20 US producers have elected not to raise prices.

PLASTICS MATERIALS

EPOXY RESINS — Dow Chemical Company will be raising list prices for epoxy resins and their precursors (see Aliphatics Market) effective October 1, company sources report.

List prices for its "D.E.R." liquid resin products 300 series, will be moved up 4c. per pound, and those for its standard solid 600 series by 3c. per pound. Brominated solution grades will be moved up 3c. per pound, and mixed solid/solution grade prices will be increased by varying amounts, depending on volume and grade. Prices for powder coating grades will not be affected.

A company spokesman says the price move is an attempt to regain margins lost to discounting, prevalent in the market for the past year.

While producers have realized some savings from lower hydrocarbon costs earlier this year, he continues, selling prices had deteriorated more than raw material costs. This increase should partially restore epoxy prices to more realistic levels, he adds.

Selling prices for liquid grades have been stable since June, producers report, ranging

around \$1.37 per pound; those for solid grades, however, have slipped somewhat, moving from a range of \$1.33 to \$1.40 per pound to from \$1.31 to \$1.37 per pound. List counts are said to remain at June's levels.

Producers provide different pictures of demand this year. In 1985, the market shrank from 376 to 361 million pounds. One source expects demand to grow by 4 percent this year, led by the aerospace and market demand. Another source disagrees, predicting that domestic demand will fall from 1 to 1 percent this year; all end markets should continue at last year's levels, this source adds, except for coatings, which he expects to fall by 3 percent.

Imports, never significant in this market, are expected to become even less so, given the weaker US dollar.

Capacity utilization rates, hard to come by in this market, are "guessed" by one source to be in the 70 percent range; no additional capacities or expansions have been brought on line to date in the commodity epoxy segment. Dow expanded its line of specialty electronic grade "Quatex" epoxies in July.

POLYETHYLENE — All remaining major domestic producers of high density polyethylene have joined in last week's price increase move led by U.S.I. Inc., E.I. du Pont de Nemours Inc., Enron Chemicals (formerly Norchem) and American Hoechst Inc.

Allied Chemical Corporation, Amoco Chemicals Company Inc., Dow Chemical USA, Chevron Chemicals Inc. and Sta. Polymer Corporation will be moving list selling prices for their full lines of HDPE resins up 4c. per pound effective October 1, 1986.

Spokesmen for the firms feel that the higher prices will help restore profitability to the market, to ensure that supply keeps up with a growing demand, and to enable the firms to continue research and development programs.

POLYSTYRENE — The Dow Chemical Company has formally announced that it will raise selling prices for its "Styron" general purpose and high impact solid polystyrene resins by 3c. per pound effective October 1. List prices will not be affected; neither will those for ignition-resistant grades.

Mobil Chemical and American Petroleum have announced similar increases informally, on an individual customer basis.

The increase follows July's 3 to 4c. per pound increase, which was fully demand driven and described by producers as largely successful.

Other producers have not yet decided whether to go along with the increase, but all describe an atmosphere of extremely strong demand, coupled with higher feedstock and production costs.

ALIPHATICS

Continued from Page 18

Md. and \$1.06 per gallon the high end in Franklin, Ky. The Baltimore price is up 6c. per gallon over June while the Franklin rate is 11c. per gallon higher than June levels in that area.

With the imminent expiration of lead credit, distillers are hopeful that ethanol sales may return to their strong growth mode of 1985. In July, total gasohol sales were 675 million gallons, only 10 million gallons over the previous month. IRI says that octane is "extremely scarce." BTX suppliers concern and call aromatic octane components "tight." IRI maintains that incremental octane is tight and explains, "the finishing capacity of the nation's refiners, including crackers, isomerization units and reformers are running near 100 percent — each anxious to process the inexpensive crude oil which is available on the world oil market."

Ethanol may be out of its doldrums at this point, according to IRI, as the prices of other octane enhancers rise they see an increased incentive by refiners to reevaluate their ethanol options.

METHYL ETHYL KETONE — Celanese Chemical Company says it will increase the market price of its methyl ethyl ketone by 10c. per pound across the board on October 1. The company hopes to bring market prices from a current range of 23 1/2c. to 24 1/2c. per pound. Celanese list prices will also be raised. The current 34c. per pound price, which includes a 2c. per pound TVA, will be replaced with a 30c. per pound list price.

Carbide Takes Stock

Continued from Page 3

to earnings before interest and taxes ratios of 3 to 1 for Dow and 4 to 1 for Monsanto. The significance of this ratio, he continues, is that in the case of a general business downturn, earnings for Carbide could quickly drop to the level of interest payments, severely restricting the company's cash flow.

In his analysis, the company "needs to get \$1 billion in assets sold quickly" in order to further reduce the debt and lower interest payments.

Carbide has, in fact, announced plans to divest another \$1 billion in assets, including the agricultural products unit, which Mr. Wishart said will be closed by early next year. The company's plan calls for debt to be reduced to \$3 billion by the end of 1987.

Analysts have generally had a positive reaction to most of the business lines Carbide has chosen to retain. The Chemicals & Plastics group, the Industrial Gas Division, and the Specialties and Services group have all been called solid performers. Only the smallest operating unit, Carbon Products, has come into criticism due to its close ties to the sputtering steel industry.

Chemicals & Plastics has sales of \$3.8 billion, 55 percent of Carbide's total, and is the leading ethylene glycol producer in the world, and with Unipol, a major force in the linear low density and high density polyethylene industries. The Industrial Gas Division, Linde, is the largest such producer in the world, Mr. Wishart said, with a 16 percent share of the world market (32 percent in US) and \$1.6 billion in sales. The Specialties and Services unit has sales of \$800 million.

Mr. Wishart also emphasizes the "critical" need for Carbide and the industry at large to generate trust and goodwill between chemical plants and the public, especially local

communities. "Chemophobia," he says, has become so advanced that the industry faces a tough challenge to educate and convince the public that production and transportation of chemicals is being handled responsibly.

He says this challenge can be met, though, by improving lines of communication between the plants and the community and by providing the public with a better understanding of what "goes on inside the fence." Being "a good neighbor is the number one mission" in the industry, he added.

Union Carbide says it will "conduct business reviews with selected potential buyers" of its electrical carbon business later in September. The business is comprised of a range of carbon-based specialty products for industry. Most of the products are sold under the "National" trademark. These include carbon brushes, carbons and other carbon and graphite products. The electrical carbon business has operations in Fostoria, Ohio, Greenville, S.C., Parma, Ohio, Toronto, Canada, Juarez, Mexico, and Sheffield, Great Britain.

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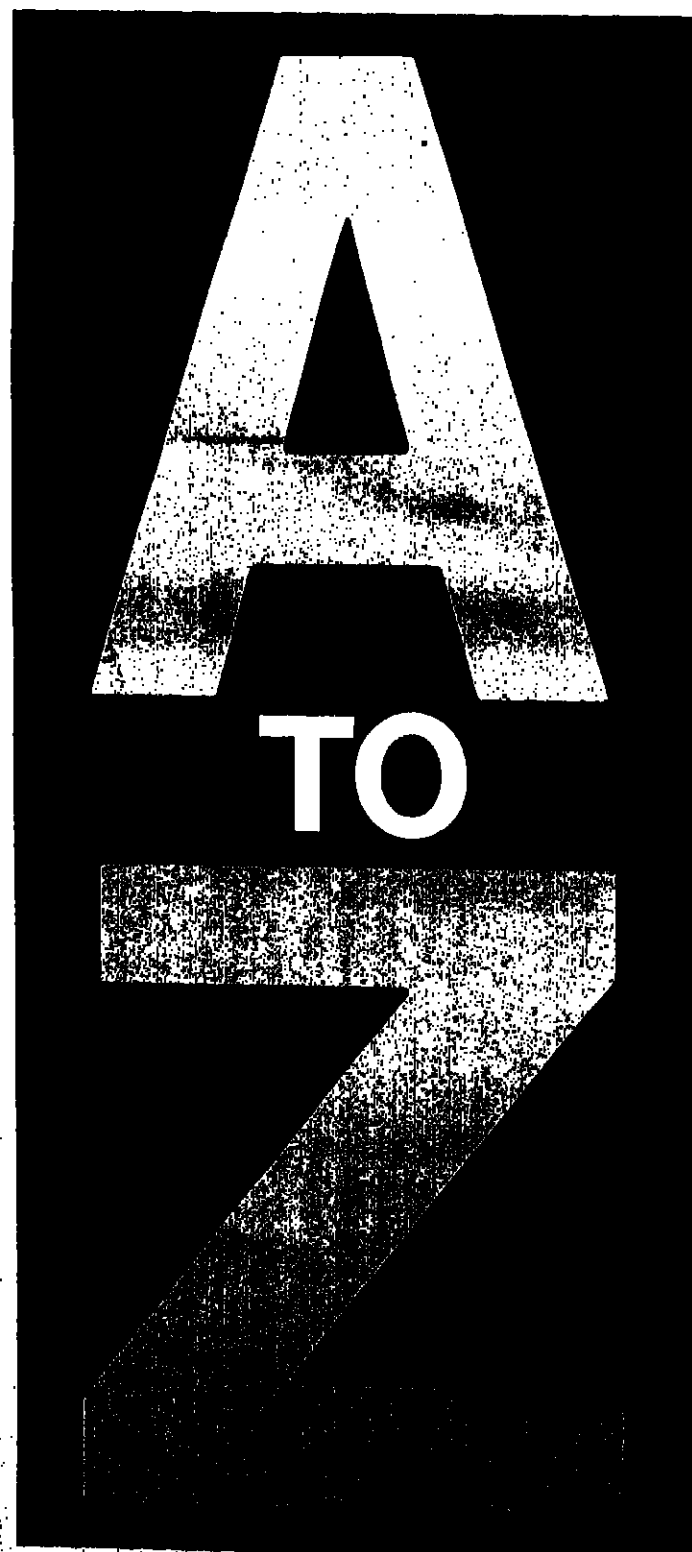
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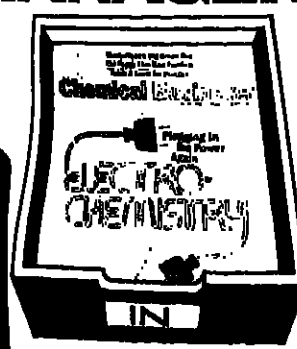
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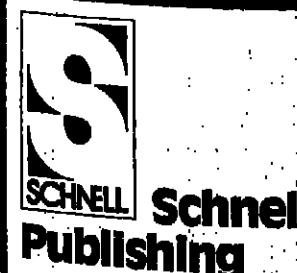
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DRUGS & FINE CHEMICALS

Penco Claims APAP

Continued from Page 4

petitive, Penco sells its material for less. Penco's spokesman won't specify powdered or granular price, but says it charges \$8.95 per pound only for small quantities. The company charges between \$7.40 and \$7.50 per pound for its direct compression grades.

European imports are said to be competitive with the domestic product, but Chinese and Turkish material costs less. However, as is the case with many products, many believe the quality of Chinese and Turkish material is not as high as that of the domestic material.

Despite this, one importer of Chinese material calls demand "healthy," and says his company's powdered and granular prices are \$1.25 to \$1.50 less per pound than the domestic producers' prices.

Importers and domestic sources agree that imports are making inroads into the US market. The first half of 1986 saw 3.25 million pounds of acetaminophen enter the US, more than 50 percent higher than the total for the comparable period in 1985. One domestic producer says this is "obviously of concern," because the weakening dollar has not slowed the imports. However, domestic sources say the import pressure is not enough to cause list price reductions. Imports are said to total about 20 percent of the US market, up from 15 to 17 percent in recent years.

DEMAND IS GROWING

Demand is growing for domestic companies as well. Mallinckrodt recently announced a capacity increase to 22 million pounds, up from 17.8 million pounds. Monsanto's capacity is 15 million pounds. While sources claim growth, no particular market segment is cited.

Acetaminophen players benefitted slightly from the decision of Johnson & Johnson and other tablet manufacturers to stop making capsules in favor of elongated tablets called caplets. However, increased demand was primarily in the form of brief surges in the beginning.

"Certainly there were some surges (in demand), but now demand has leveled," says one producer. Another domestic producer comments that the transition from capsules to caplets was "very slow," but agrees that there were some surges.

Penco, which entered the market when these decisions were being made, says its timing wasn't such that it could take full advantage of the situation. "I don't think it hurt us...it just narrowed our opportunity for business," says Penco's spokesman.

Meanwhile, as Penco attempts to make further inroads against Mallinckrodt and Monsanto, the industry awaits more news about Celanese's decision to enter the acetaminophen market by 1988.

In June, 1985, Celanese announced that it would begin commercial production of acetaminophen after developing a new process which it feels will allow the company to become the world's lowest cost producer of the product.

A Celanese spokesman says there has been no change in the company's plan, and that it is hoping to begin production on schedule. Some domestic sources, however, have doubts that Celanese will actually enter the market.

One producer says if Celanese plans to enter by 1988, it is time to become more public and to start making commitments. This producer says he has heard nothing since the initial announcement.

Likewise, another producer says, "I don't really think (Celanese) will ever get into acetaminophen." He says that all three existing producers have spent much time researching acetaminophen production, and does not understand how Celanese can make it for less and still make money. He adds that he was "dumbfounded" by Celanese's announced plan because he doubts there is enough money to be made to make the venture worthwhile for a company the size of Celanese.

ADJUVANTS — RIBI ImmunoChem Research, Inc., claims that its adjuvants, sub-

stances that improve response to vaccines, are being vastly improved. A spokesman says the "new breed" of adjuvants is helping researchers in developing systems for vaccines which may offer protection against diseases such as AIDS, hepatitis, herpes, meningitis and pneumonia.

Advances in biotechnology and genetic engineering are said to have spurred the new vaccines. Nils A. Ribi, president and chief operating officer of RIBI, says there are essentially three steps until the products, introduced in January, are immersed in the market.

PRICES TRENDLINES

WEEK ENDING AUG. 29, 1986

CHANGES/UP

None

CHANGES/DOWN

None

DRUGS INDEX

The Drugs & Fine Chemicals Index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Aug. 29, 1986	211.18
Aug. 22, 1986	211.18
July 25, 1986	211.18
Aug. 28, 1985	211.18

Chemical Prices Start on Page 34

ketplace. First, the adjuvants are being used now in research study. Much of the research is being done by pharmaceutical and biotechnology companies. Second, the adjuvants will have to break into the veterinary marketplace. This is described as a challenge by Mr. Ribi, because vaccine prices in this area are so low, it will be difficult to be cost-effective. Third, the product will have to be readied for human use. Mr. Ribi notes that an AIDS adjuvant is taking priority over most of the other diseases, mainly because of its importance to the public.

A spokesman says new adjuvants would replace older vaccines developed over the past 50 years. A problem with the current vaccines, he continues, is that while they have been successful in combating smallpox, polio and measles, they can cause harmful side effects, such as redness, swelling and even shock.

RIBI explains that most existing vaccines are usually prepared from non-virulent whole organisms or from components of the organism. New vaccines use only small portions of the various bacterial or viral cells. However, while these are safer, some are not effective enough to stimulate strong immune responses. Therefore, reasons RIBI, there is a growing need for adjuvants that can exploit the full potential of these vaccines.

RIBI is attempting to meet this need via the RIBI Adjuvant Systems (RAS). Mr. Ribi says this is an improvement over the standard research adjuvant, Complete Freund's Adjuvant, because it contains two percent oil content, while the latter consists of killed whole tubercule bacilli with a 50 percent oil, and is unsuitable for human and many animal uses. Mr. Ribi says that by substituting the whole tubercule bacilli with reduced oil and non-toxic components, RAS is safer.

Mr. Ribi adds that encouraging results have been seen in developing cancer vaccines, but that this research is in its infancy. **ANTI-INFLAMMATORY STEROIDS** — Pharmatec, Inc. and Nova Pharmaceutical Corporation have reached an agreement allowing Nova to become exclusive worldwide marketer for Pharmatec's "Carrier," developed for use with drugs to treat brain tumors and anti-inflammatory steroids to treat brain inflammation.

Pharmatec says that by using its "Carrier," delivery of anti-cancer agents like

DRUGS & FINE CHEMS

chlorambucil and nitrosoureas to the brain will be made easier. Primary and metastatic brain cancer cannot always be treated by drugs alone. Spokesmen for Pharmatec and Nova say the product is still being researched, and one notes the companies are hoping to begin clinical trials in 1987, and to be marketing "Carrier" by the early 1990's.

Under the agreement, Nova pays Pharmatec to synthesize two Carrier/drug combinations to treat brain inflammation and at least two "Carrier"/steroid combinations to treat brain inflammations. Pharmatec will also conduct animal studies to study brain delivery. Nova is funding development costs and clinical trials. According to a spokesman, Pharmatec will be able to manufacture the products for Nova under certain conditions of the agreement.

D-CALCIUM PANTOTHENATE — BASF Corporation is raising the price of its USP-grade d-calcium pantothenate to \$12.50 per kilogram, effective September 2. This is a one-dollar per kilogram increase over its previous price.

BASF raised its d-cal pan price as recently as late May. That was also a one-dollar-per-kilogram increase (CMR, 5/26/86, pg. 16). BASF is said to be initiating this price increase and no other d-cal pan spokesmen have announced similar increases yet.

The spokesman says that the increase is a further attempt to raise prices to normal levels, after a depressed period. Also, he says that supplies are currently very tight be-

cause the feed side has seen an increase in demand. He continues that demand on the USP side has been stable.

Other B-vitamins are still firming, says the spokesman, although the list price has not been changed for any of them recently. As for d-cal-pan, he anticipates further increase, but adds the price should not change during the remainder of 1986.

GLUCOAMYLASE — Enzyme Technology Corporation is raising its glucoamylase spot prices by about 15 percent, effective immediately. ETC is a wholly-owned subsidiary of Great Lakes Chemical Corporation.

The spot bulk price for "Zymetec" GA-200 is now \$3 per liter for fuel ethanol grade and \$3.50 per liter for food grade. Truckload quantities packaged in drums are 10c. per liter higher. Terms are net 30 days, f.o.b., Terre Haute, Ind. Contractual prices will remain the same for the rest of 1986.

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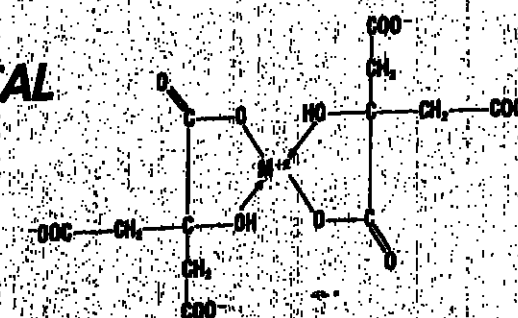
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Crude Oil's Effect

Continued from Page 3

prices yet. In addition, heating oil stocks in Europe are very high at present, sharply curtailing the need for crude in Western Europe. Another important factor in world oil prices, sources say, are non-OPEC members who depend heavily on oil sales for hard cash. Mr. James notes that while Mexico and the Soviet Union have paid lip service to following OPEC's production cutback policy, both countries' need for oil revenues may quickly send them into the market with added volume at lower prices.

Several other analysts have taken a "seeing is believing" stance towards OPEC's steadfastness. Patrick Baggett, vice-president of Chemical Marketing Associates, Inc., has taken the position that "until we see some lengthy period of constraint (on the part of OPEC members to maintain their quotas), it is more than likely the price of crude oil will fall rather than increase."

Having said that though, Mr. Baggett, like most other analysts, directly attributes the current round of petrochemical price increases to higher crude values. Mr. Baggett attributes the current price firming to many oil dealers and traders who were caught short of material in early Summer and had to scramble in July and August to cover their positions. This, combined with speculation that the OPEC agreement would drive prices up, has led to the current run-up, he says.

Naturally, benzene was the first petrochemical to respond to the reversal of crude's lengthy price slide this Winter and Spring. Hugh Pylant, project manager at Pace Consultants in Houston, says spot benzene prices have firmed from 65 cents to 68 cents per gallon on August 1 to 76 cents last week. Toluene also followed upwards, moving from 57 cents to 60 cents a gallon on August 1 to 66 cents to 68 cents per gallon last week. Contract prices for benzene were raised 5 cents per gallon September 1 to reflect these higher levels.

Another observer notes that the spiral in benzene prices will continue at least through September. Leonard Boyd, president of Enx, Inc., a Houston consulting firm, says the benzene price increases are reacting to crude oil price firming in July. Crude gains posted in August, he notes, will not be reflected in higher benzene values until a month later. He says that for each \$1 barrel

adjustment in crude oil prices (up or down), benzene values change 3.8 cents per gallon. For example, he says if the price of crude paid by the refiner reached \$18 per barrel, then benzene prices will reach 88 cents per gallon. If, as some speculate, crude prices climb to \$18 to \$20 per barrel, benzene would then rise to 98 cents to \$1.07 per gallon. And as Mr. Boyd points out, benzene's demand position is having no impact on pricing; the increases are coming about entirely due to cost pushes from crude oil.

Styrene manufacturers were among the first chemical intermediate producers to see cost increases as a reason to hike prices. After a year of dismal returns on styrene, the producers posted 3 cents per pound price increases for September 1, a boost that strong operating rates at the plant may help in passing the increase. Two other major benzene derivatives cumene and cyclohexene were also hiked in price September 1.

A second cost-push on styrene is the 2 cent per pound ethylene price increase launched September 1. Ethylene itself came under strong cost pressure last month when the price of two feedstocks, gas oil and naphtha rose sharply as a result of higher crude prices. Gas oil prices rose nearly 10 cents per gallon and naphtha prices shot up 9 cents per gallon during a two week period in August alone.

The September 1 ethylene price hike follows a similar increase that failed in July. Producers are seeking a selling price of 10 cents per pound. Mr. Pylant says the high price of ethane, which has become relatively scarce, coupled with the rising price of heavy feedstocks prompted the ethylene hike. In addition, the high use of heavy feedstocks has sharply boosted the supply of co-products propylene and butadiene, both of which have been priced extremely low, further straining olefin makers' margins.

Ethylene producers are helped by a very snug supply-demand balance. One analyst estimates that the industry is operating at over 90 percent of on-line capacity. Supplies have been further constrained at this time by turnarounds of several major producers such as Dow, Exxon, and Shell. One producer says that if the industry exercises "discipline," the increase should stick. In addition to posting the ethylene price hike, several olefin makers have also boosted propylene selling prices 1 cent per pound.

Low density polyethylene makers moved right away to hike prices after ethylene price increases were announced. One analyst says LDPE price increases of 5 cents per pound were largely cost driven, but he also notes that demand is strong and the industry is operating at high capacity.

Plastic prices have been very weak for the past year, sources note, and any increase in

raw materials costs will be quickly followed by polymer price hikes. For polymer makers, one analyst says, oil price increases represent a chance for polymer makers to justify hiking prices, a task which has gotten very difficult since the crude slide last winter. The failed July 1 ethylene price hike, he notes, stymied an effort by PE producers to boost selling levels. In the current equation, he says, if ethylene prices increase 2 cents per pound PE prices should rise 3 cents per pound.

In addition to these products, analysts project that many more petrochemicals and plastics will be raised in price October 1, but only if the current crude oil price rally sustains itself. Mr. Baggett of CMAI says, though, that if the OPEC accord disintegrates, or a non-member producer boosts supply, crude prices could quickly slip back under \$13 per barrel, enough of a decline, he says, to wipe out the price gains made by most petrochemical producers.

Hazardous Substance

Continued from Page 7

occurred within a plant facility, the reporting requirement applies at the moment a person in charge has knowledge that a release of a reportable quantity of a substance

leaves that facility, even if the environmental release occurs through the air venting process.

The adjustments of the final reporting levels for 102 hazardous substances include lowering the reporting levels of 30 chemicals, raising the reporting levels of 38 chemicals and formally leaving 34 at the original reporting levels. Of these 102 hazardous substances, reporting levels for 63 substances were originally established under the CWA.

The reporting levels are determined on the basis of a substance's tendency to ignite, to react with other substances, to cause acute and chronic health effects and potential to cause cancer. In addition, the agency considers the substance's likelihood to form more hazardous products in relation with other substances or to degrade into less harmful components in sunlight and in water, reducing immediate and potential threats.

On April 4, 1985, EPA set final reporting levels for 340 of the 717 substances. The remaining 275 substances are still being assessed for potential carcinogenicity and chronic toxicity for future adjustment, if necessary.

Chemical Distributors

Continued from Page 5

1980. Two primary factors contributing to the higher growth are the faster overall growth of these industries and the increasing focus placed on these industries by distributors.

The new Kline survey is a comprehensive analysis of the U.S. chemical distribution business based on over 3-0 interviews with distributors, producers, end users, and other trade factors. The survey profiles the businesses of 126 chemicals distributors and provides a thorough analysis of the business dynamics and driving forces for growth. In addition, ten end-use industries are analyzed in terms of their use of distributors. The report is available on a subscription basis from C. H. Kline & Co., Inc., 330 Passaic Avenue, Fairfield, N.J. 07006 or Kline S.A., Rue Froissart 89, B-1040 Brussels, Belgium.

Plastic Molding

Continued from Page 7

Experts in the plastics industry predict that by 1985 the cubic volume of plastics produced in the US will exceed that of steel. They also estimate a five-fold increase in the use of engineering thermoplastics at the expense of die-cast metal within the next five years, he went on.

"The industry is in a strong growth mode, but industry perception nationwide is that the state's existing molded-plastics plants are resistant to modernization, a situation favorable to start-up companies using the latest design and manufacturing technology," Mr. McIlhenny says.

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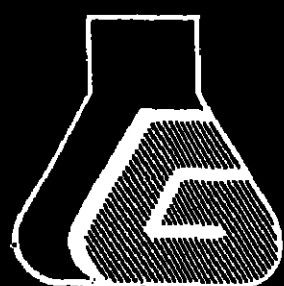
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Environmental Solutions Available

Continued from Page 5

nel should be taught to look for these errors, something not practiced now because "its not part of their job to notice, or they are too familiar with the facility and fail to see problems which others...will see."

Development of special safety training programs for plant personnel, formalized emergency plans and inspection procedures, proper labeling of stored hazardous wastes, and the use of spill pans in loading and unloading areas were among the solutions he proposed.

Mr. Brandwein made his presentation based on a paper he wrote with Gordon T. Brookman, also of Environmental Risk Limited.

Another researcher reported that Biological treatment, using bacteria, could prove to be the most effective way of removing polychlorinated biphenyls from New England's Housatonic River. But, according to Bryce I. MacDonald, manager of environmental issues for General Electric in Fairfield, Connecticut, until this technology is perfected, restricting the down-river flow of PCB's should be the focus of clean-up efforts.

Mr. MacDonald cited transport of PCB's as a crucial issue because of the river's flow pattern. From its source in Massachusetts, where the greatest number of PCB's are concentrated, the Housatonic runs through Connecticut and into the Long Island Sound. While sections of the river in Massachusetts are not used extensively for recreation, the presence of PCB's in the Connecticut stretch threatens "one of the best trout rivers in New England," Mr. MacDonald said. He added that Connecticut's goal of using the Housatonic "as a fully developed recreation resource" is also in jeopardy.

Physical removal of the PCB's poses a problem, according to Mr. MacDonald, because available technologies, such as sediment removal or rechanneling, are expensive or would have a substantial impact on the environment.

On the other hand, he proposed, biological treatment may be the key to long-range PCB clean-up efforts since bacteria can work effectively underwater with little or no negative impact on the surrounding area. He cited studies conducted in the Hudson River and in Illinois' Waukegan Harbor where bacteria were found to detoxify PCB's.

Mr. MacDonald informed attendees that General Electric's laboratory has "isolated and characterized two dozen bacterial strains capable of biodegrading PCB's..." However, he believes "large scale application is some years away."

In the meantime, Mr. MacDonald suggested that restricting the flow of PCB's down-river, using dams as sediment traps, could help minimize the problem. He described an experiment underway near Woods Pond, Mass., that is closing off the by-pass on a dam in an effort to keep the compound from flowing further down-stream.

Since the greatest concentration of PCB's is just north of this region, the sediment trap could reduce overall transport of PCB's into Connecticut and Long Island Sound.

In another presentation to the meeting, a researcher said that advances in biotechnology may revitalize the paper industry. Declining profits due to rising costs for wood, chemicals, energy, labor and pollution-control equipment have characterized the US pulp and paper industry in recent years.

E. Michael Egan, an executive with Repli-

gen, Inc. in Cambridge, Mass., said that researchers have isolated a group of enzymes which can improve the economics, efficiency and environmental effects of pulping processes.

Traditional pulping relies on chemical and mechanical processes that "have various handicaps which include high energy consumption, damage to...fibers, low yields, corrosion and environmental nuisance," Mr. Egan said. He reported that the new group of enzymes compare favorably on all these scores.

The enzymes have been isolated from the white rot fungus, which occurs naturally in forests. Now produced on a laboratory-scale using genetically-engineered bacteria, Egan believes industrial-scale production will become possible with further research.

"If available in sufficient quantity, these enzymes could be used to carry out many of the reactions in pulp processing operations," Mr. Egan remarked. He added that "ultimately, it may be possible to produce high quality, color-stable pulp in high yielding processes predominantly based on enzyme technology."

EPA Guidelines

Continued from Page 3

priority will be given to continuing to develop and validate alternative methods to the presently used and somewhat simplistic linearized, multistage model," he went on.

"We also hope the important National Academy of Sciences workshop on pharmacokinetics, scheduled in October, will expand the use of pharmacokinetic data in assessing risks and that the output of that 'state-of-the-science' review will quickly be incorporated in these guidelines. We are pleased that AHC has been able to join with EPA and the National Institute of Environmental Health Sciences in cosponsoring this important scientific meeting."

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PERFUMES & FLAVORINGS

Natural Menthol Imports Rise Due to Tariffs and Contracts

Natural menthol imports surged from 88,357 pounds in May to 422,909 pounds in June. The June amount is nearly half of the January through June, 1985, imports, which totalled 852,793 pounds. Prices, however, have remained stable at \$6 per pound.

The buying spree was a carryover from the 1985 import climate, when, according to one importer, "China was unable to meet its commitments in terms of shipping dates, causing a shortfall of material." The consumer reaction was to secure longer-term contracts in the event of a future shortage, and to buy a larger percentage of Brazilian menthol. As a result, from April 1, 1985 to March 31, 1986 Brazilian imports accounted for 53 percent of the American market, making it ineligible for preferred status, says this same importer. Thus the import increase was due to buyers beating the July 1 reinstatement of Brazil's US tariff.

The long-term contracts provide incentive to the brokers, says an importer, because "they can then fulfill their remaining obligations at a lower price." The market itself remains unaffected: "The market is quite stable, not fluctuating more than 5 percent either way for the last year."

One trade source suggests that heavy rains in China would reduce the harvest by knocking the leaves from the stems, but an importer familiar with domestic and foreign mint crops rejects this. "As long as the crop is planted it will be distilled. Rains do not affect the harvest more than a few percentage points every year."

DIFFERENCE OF OPINION

The difference between the Chinese and Brazilian menthol is entirely one of opinion. The Brazilian enjoys a traditional clientele. "The majority of my customers prefer the Brazilian because they've been buying it since the fifties," says an importer. But a broker says there's a qualitative difference: "The Brazilian is not nearly as nice as the Chinese menthol; the Chinese is composed of long, beautiful crystals."

According to one source, synthetic menthol competition has tightened considerably: "The manufacturers have fixed production costs and since prices have dropped by nearly a third from \$24 per kilo to \$14 per kilo in the last year, it's more difficult to make a profit." He contends the natural menthol producing countries have an advantage. "When dealing with natural costs, labor is the issue. Brazil and China's natural costs are lower."

US import tariffs play a big role in the synthetic industry. The tariff on Japanese material is 9 percent while the Japanese tariff on imports is 37 percent, according to one trade source. Mexico obtained the preferred status, and now controls over half of the US menthol market, yet "their status remains, they still don't pay any duties," claims a manufacturer. "The Mexicans can now buy material abroad, reexport it to the US, and still beat the going price."

US consumption of menthol is broken down by tobacco products, 45 percent, toothpaste and other over the counter products, 40 percent, and other products, 15 percent. "Menthol is a very mature market," says an analyst, "and the tobacco industry claims the total number of cigarette smokers is decreasing."

SEEDS & SPICES

LAUREL LEAVES — Laurel leaf prices have shot up over 135 percent in the last two weeks from 80c. per pound for Turkish semi-select to \$1.90. The same assumption behind the oregano price jumps, radioactive contamination of the 1986 crop, is responsible for the Laurel leaf situation.

"Rumour has it that the 1986 harvest is going bad," says one importer. "The outlook is worsened, he says, by a poor 1985 crop." Last

year's crop was so small they're asking astronomical prices for what's left.

A lack of hard evidence is proving frustrating to the industry. "No testing has been done to determine the quality of the crop," says a

PRICES TRENDLINES

WEEK ENDING AUG. 29, 1986

CHANGES/UP

Anatto Seed, Dominican, 3c. per lb.
Anatto Seed, Indian, 5c. per lb.
Anatto Seed, Kenyan, 2c. per lb.
Cassia Seed, Dutch, 3c. per lb.
Cassia Seed, Indian, 2c. per lb.
Oil Seed, Egyptian, 10c. per lb.
Fennel Seed, Egyptian, 4c. per lb.
Geranium Oil, Egyptian, 52c. per lb.
Laural Leaves, Turkish, semi-select, 45c. per lb.
Nutmeg Oil, 61c. per kilo
Nutmeg, E.I. Whole, 5c. per lb.
Nutmeg, E.I. Reconditioned delivered, 3-10c. per lb.
Oregano, Greek/Turkish, 20c. per lb.
Poppy Seed, Dutch, 4c. per lb.
Poppy Seed, Turkish, 15c. per lb.
Sage, Dalmatian Prima, 5c. per lb.
Thyme, Spanish, 3-5c. per lb.
Thyme, French, 5c. per lb.
Valerian Oil, Italian, \$3.50 per kilo

CHANGES/DOWN

Cardamoms, Indian bleached, 50c. per lb.
Clove Leaf Oil, Madagascar, \$2.50 per kilo
Cumin Seed, Turkish, 3c. per lb.
Geranium Oil, Chinese, \$3.00 per kilo
Ginger Oil, Indian, \$2.00 per kilo

PERFUMES INDEX

The Perfumes & Flavorings Index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Aug. 29, 1986	71.00
Aug. 22, 1986	71.00
Aug. 1, 1986	71.00
Aug. 28, 1985	71.00

Chemical Prices Start on Page 34.

broker, "but we know that Turkey can't ship it."

PEPPER — White pepper recorded its largest jump in price this week since early April, from \$2.45 per pound to \$2.78. Reports that the Brazilian white pepper crop will be reduced from 6,000 to 1,500 pounds fueled the increase.

In addition to Brazil's decision, an importer says, the European demand has increased: "The major market for white pepper is in Europe and the buying climate there has become more active." A broker suggests that prices were held down in anticipation of this activity. "White pepper may have been held steady because the producers were waiting for the European demand."

The impact of the Brazilian reduction is timely, coming just before its harvest of September and October. Indonesia's white crop harvest ended in June, according to one source, leaving only the more flexible Malaysian growers an opportunity to adjust.

Black pepper prices continued to climb with Brazilian, Lampung, and Malabar all rising 5c. per pound. The market strength is reportedly due to increasing demand.

SAGE — The prices of Albanian and Turkish sage increased last week for the first time since late February. Albanian sage went up 10c. to \$1.45 per pound and Turkish limited sage rose from 15c. to 20c. to \$1.10 per pound. Dalmatian prime sage followed with a 5c. per pound increase from \$1.80 to \$1.85, presumably in response to its competitors' price hikes.

An importer suggests the same hesitancy in the oregano market applies to the Albanian and Turkish sage. "As long as there is some doubt over the ability to distribute sage on the US market, buyers will pay more to be reassured."



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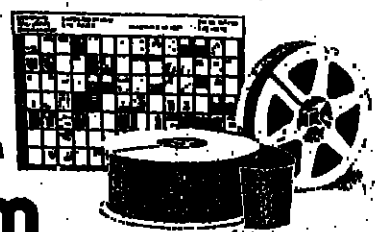
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Chemical Finance

Mesa Partnership Offering Preference A Units

Mesa Limited Partnership has filed a registration statement covering an offering of up to 23 million Preference A units. The partnership also announced that it intends to continue to distribute 50 cents per quarter per common unit through at least the first quarter of 1987.

Amoco Calling Its 1989 Floating Rate Notes

Amoco Corporation, Chicago, will exercise its right to call all of the \$78,142,000 of outstanding floating rate notes due 1989 and listed on the New York Stock Exchange. Citibank NA in New York and First National Bank of Chicago will act as co-paying agents. Amoco also will redeem \$20,799,000 of debentures listed on the Luxembourg Stock Exchange.

Borden Completes Acquisition of Daxsee

Borden Incorporated has completed the previously announced acquisition of Daxsee Food Corporation for \$32.5 billion, or \$10.75 per share.

Albright & Wilson's Profits Off in 1st Half

Albright & Wilson Ltd., of the UK had a 2 percent decline in sales in the first half to \$491.4 million from \$499.4 million a year ago, and profits before interest and taxation were off 3 percent to \$36.2 million from \$37.4 million. Capital expenditures were \$18.3 million, versus \$33.2 million a year earlier.

Cetus Corporation to Set Up Subsidiary in Europe

Cetus Corporation, Emeryville, Calif., will form a wholly owned subsidiary in Europe to develop, manufacture and directly market the company's therapeutic products on that continent. Initial focus of EuroCetus will be on interleukin-2, tumor necrosis factor, colony stimulating factor-1, human monoclonal antibodies and immunotoxins for breast and ovarian cancer.

Falconbridge Completes Sale of CFC Stake

Falconbridge Ltd., Toronto, Canada, has completed the sale of its 6,673,296 shares of Corporation Falconbridge Copper to Kerr Addison Mines Ltd. for \$18 per share. The shares represent 50 percent of CFC's outstanding stock.

Freeport-McMoRan Gold Opens New Plant

Freeport-McMoRan Gold Company, New Orleans, La., has begun gold production from its new heap-leach facilities at its Jerritt Canyon mine, fifty miles North of Elko, Nev. This new process provides a low-cost method of recovering gold from Jerritt's lower-grade ores.

UCC Selling Electrical Carbon Business

Union Carbide Corporation intends to sell its electrical carbon business as a further step in its program to enhance shareholders' values. UCC will conduct business reviews with selected potential buyers in the next few weeks. Proceeds will be used to reduce corporate debt. The business has operations in Ohio, South Carolina, Canada, Mexico and England.

American Petrofina Plans Offering of Equity

American Petrofina Inc., Dallas, Tex., has filed a statement with Securities & Exchange Commission for the offering of 1,205,000 shares of Class A common stock to its stockholders on a ratio of one new share for each ten now held, at a price of \$45 per share. The company's parent, Petrofina Delaware, Inc. — a wholly owned subsidiary of Petrofina SA of Brussels, Belgium — will subscribe to the shares to which it is entitled.

Bayer's Income Rises on Steep Sales Drop

Bayer Group, of West Germany, experienced a sharp sales decline of 12.2 percent in the first half to 21,595 billion West German marks (about \$10.7 billion) from 24,583 marks (\$12.3 billion) a year earlier, largely reflecting the decline in the value of the dollar versus the mark, along with some price weakness. Profits before taxes, however, rose slightly by 0.9 percent to 1.74 billion marks (about \$865 million) from 1.725 billion marks (\$862 million).

Economics Lab Buys Chisso Stake in Japan

Economics Laboratory, St. Paul, Minn., a provider of institutional cleaning services and products, has purchased Chisso Corporation's 50 percent share in their joint Japanese venture, El Japan, thereby raising its interest to 100 percent.

Enzon Planning to Raise New Capital

Enzon Incorporated, South Plainfield, N.J., developer of the process to modify enzymes with polyethylene glycol (PEG), is drawing up plans to increase its capital base. The program is expected to include the issue of 1 million new common shares for public trading, placement of a large block of untraded stock and sale of a significant investment to another pharmaceutical company. Enzon now has 8.3 million shares outstanding with a market value of about \$70 million.

ICI, BOC, Wardle Storeys Shares Recommended

Greenwell Montagu Research in the UK has reaffirmed share purchase recommendations for Imperial Chemical Industries PLC, BOC Group PLC and Wardle Storeys PLC. The company's advice on Hickson International PLC and Yorkshire Chemicals PLC is to hold the shares. Recently the firm's analysts — Stuart Wamsley, David Hughes and Judy Shaw — raised their recommendation on Brent Chemicals PLC from hold to buy. The recommendation on Akzo NV of the Netherlands is to hold the shares.



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HEAVY & AG CHEMICALS

Sulfuric Acid Mart

Continued from Page 7

Conn., that usually consumes acid recovered at Gaspe, is being supplied with US material bought by Noranda.

Noranda has also shipped virgin acid into Canada that was made by Essex at its Newark, N.J., plant. Noranda considers this an exception, though, and says that for the most part Canadian accounts have been filled with Canadian acid, due to considerations of cost, shipping rates and currency values. Moreover, as other metal smelters come back on line after summer turnarounds, Noranda feels more Canadian acid will become available to fill Canadian accounts.

Also affected by the strike is Delta Chemical, Inc., which markets some Noranda material. Sources say Delta has increased output from its Searport, Maine, virgin acid plant since the strike began.

A Du Pont company sulfuric acid manager says that although his company markets no Canadian material, it has experienced increased demand at its Grassell, N.J., sulfur burning plant. He says Du Pont has filled orders for some US buyers who ordinarily purchase Canadian acid. Du Pont produces virgin acid at a number of locations and markets domestic smelter acid.

Another repercussion of the strike is the August 20 start-up of one of C-I-L's sulfur-burning plants in Sayerville, N.J. C-I-L markets some of the output from the Valleyfield facility.

In May C-I-L had announced that the Sayerville plant would be re-started by the end of 1986. A spokesman now says the date was moved up, at least in part due to the Noranda strike. He says C-I-L's inventories began to drop this summer and that the early start-up was necessary to ensure adequate customer supply.

Sources in the Southeast and Midwest say that the Noranda shutdown has had little if any effect on supplies in those areas. In fact, a spokesman for PVS Chemicals, a large Midwest producer, says prices have suffered over the past few months as a result of competition from other sources in the North.

Prices in the northeast have been relatively stable, despite the market shifting, and start at about \$85 per ton for 100 percent acid, sold to larger accounts. Prices in the Midwest, which had been on par with the Northeast this spring, are said to have dipped about \$3 per ton. Southeast pricing remains the lowest, between \$85 and \$60 per ton.

Bureau of Census figures indicate that prior to the Noranda strike, Canadian sulfuric acid imports were running very strongly. Through June, 519,076 tons of acid were imported from Canada, as opposed to only 192,952 tons imported through June of 1985. Canada accounts for over 90 percent of all imports.

BASES & SALTS

ALUMINUM SULFATE — General Chemical Corporation (formerly Allied) has announced an increase in the schedule price of all grades of aluminum sulfate. The increase becomes effective immediately on spot orders and October 1, 1986, as allowed on contracts.

The new distributor schedule price of

PRICE HIGHLIGHTS		
INORGANICS IN AUGUST		
	AUG. (US \$)	JULY (US \$)
Ammonia, US Gulf, barges	75-80	75-80
Caustic Soda, US Gulf, railcars	80-90	80-90
Chlorine, US Gulf, tankers	140-150	140-150
GAP, US Gulf, barges	130-132	130-132
Soda Ash, Green River, Wyo.	72-77	74
Sulfuric Acid, 98%, tankers	85-90	85-90

Prices are in short tons and represent spot quotations for large buyers.

standard ground and low iron granular aluminum sulfate in 100 pound bags is \$95 per net ton, f.o.b. manufacturing and warehouse locations East of the Rockies, and \$120 per net ton f.o.b. Denver, Colo., and Bay Point, Calif.

The new distributor schedule price for powdered alum in 100 pound bags is \$245 per net ton f.o.b. East St. Louis, Ill., and North Claymont, Del., and \$275 per net ton, f.o.b. Bay Point, Calif.

Shipments ex-General Chemical were

PRICES TRENDLINES

WEEK ENDING AUG. 29, 1986

CHANGES/UP

Caustic Soda, \$25 per ton
Sodium chlorate, \$25 per ton

CHANGES/DOWN

None

HEAVY & AG INDEX

The Heavy & Ag Chemicals Index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1986.

Aug. 29, 1986	113.80
Aug. 22, 1986	113.80
Aug. 1, 1986	113.80
Aug. 30, 1985	113.80

Chemical Prices Start on Page 34

houses will not be equalized with any competitive point.

A spokesman attributes the increase in higher labor and energy costs and to manufacturing costs unrelated to raw materials. General Chemical reduced dry alum price in April from \$217.80 per ton to \$185 per ton in response to the threat of low priced imports from Jamaica (CMR, 5/5/86, pg. 49). General Chemical now says import volume declined when the price was decreased and points out that a similar pricing response could be repeated if necessary.

CAUSTIC SODA — Last week three chloralkali producers announced price increases for liquid caustic soda, following the lead established by Dow Chemical (CMR, 7/25/86, pg. 27).

LCP Chemicals & Plastics Inc. has increased its off list price for liquid caustic soda by \$30 per ton, effective immediately as contracts allow. The increase is for both regular and rayon grade material. New prices will not exceed currently list prices which are \$220 per ton for regular grade, \$240 per ton for rayon grade, f.o.b. all shipping points.

Olin Corporation announced an increase in the off-list price of caustic soda by \$35 per ton, effective immediately for spot customers and as contract terms permit.

Terms of sale for Olin remain f.o.b. plant, freight equalized with the nearest recognized competitive producing point at time of shipment.

Diamond-Shamrock Chemical Company also announced a \$25 per ton increase in its off list price for liquid caustic soda, effective August 28 to spot customers, and as terms permit, to contract customers.

Diamond-Shamrock notes that since January, 1985 the chloralkali industry has produced 7,700 tons per day of effective capacity, and that since peak capacity levels in 1984, that capacity has been reduced to 10,000 tons per day.

The company adds that demand for liquid caustic soda inventories have increased significantly from 1985 year-end levels.

SODIUM CHLORATE — Two chlorate producers have announced price increases, following a move initiated by Alby-Olin, a joint venture of Olin Corp. and Alby Chlorate AB, in March 1986.

HEAVY CHEMICALS

sodium chlorate price by \$25 per ton, effective immediately for spot customers and according to terms for contract customers.

The new price of sodium chlorate crystal is \$315 per ton, delivered, in the Northern US and \$335 per ton, delivered, in the Southern US. The Southern region includes the states of Oklahoma, Arkansas, Tennessee and North Carolina and all states South.

Alby-Olin's new list price for solution sodium chlorate is \$330 per ton, f.o.b. McIntosh, Ala., freight equalized with the nearest recognized producing point at time of shipment.

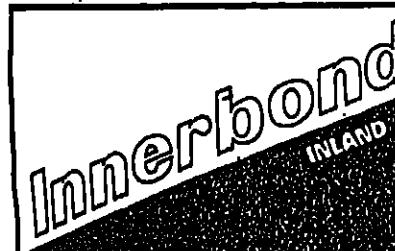
Kerr-McGee Chemical Corporation says that effective immediately it is amending the list price for bulk sodium chlorate crystal produced at Hamilton, Miss., and sold to the pulp and paper industry, to \$335 per ton, freight allowed and prepaid.

The list price for Kerr-McGee's bulk sodium chlorate crystal produced at Henderson, Nev., will remain at \$40 per ton, f.o.b. Henderson, Nev., freight equalized.

The price announcements follow a period of capacity rationalizations which has improved the industry's supply/demand picture (CMR, 7/28/86, pg. 9).

SULFUR DIOXIDE — Cominco American Inc. is increasing its price for sulfur dioxide to \$150 per ton from \$140 per ton. The new price is effective October 1 and is f.o.b. Trail, British Columbia.

A spokesman says the company is follow-



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ing a similar announcement made by Stauffer Chemical (CMR, 8/18/86, pg. 28). Cominco produces sulfur dioxide as a byproduct of zinc and lead smelting. Cominco's smelter is in the process of coming back from a month-long turnaround. Cominco shares the Northwest sulfur dioxide market with material sold by Stauffer and Virginia Chemical.

INDUSTRIAL ACIDS

HYDROFLUOSILICIC ACID — Gardiner Inc. says it is increasing the price of its hydrofluosilicic acid (HFS) and sodium silicofluoride (SSF), effective October 1. HFS will be hiked to \$190 per ton, 100 percent ton basis, for contract customers. Spot sales, when available, will be at \$210 per ton, 100 percent ton basis. The current price is \$140 per ton.

SSF will be increased to \$21.50 per hundredweight from \$19.75 per hundredweight. Both prices are f.o.b. Tampa, Fla.

Gardiner attributes the increase to the continued tightness of the water fluoridation chemical market (CMR, 8/11/86, pg. 28). The announcement follows a similar one made by Freeport Chemical Company (CMR, 7/28/86, pg. 25). The two companies are generally regarded to be the largest SSF producers.



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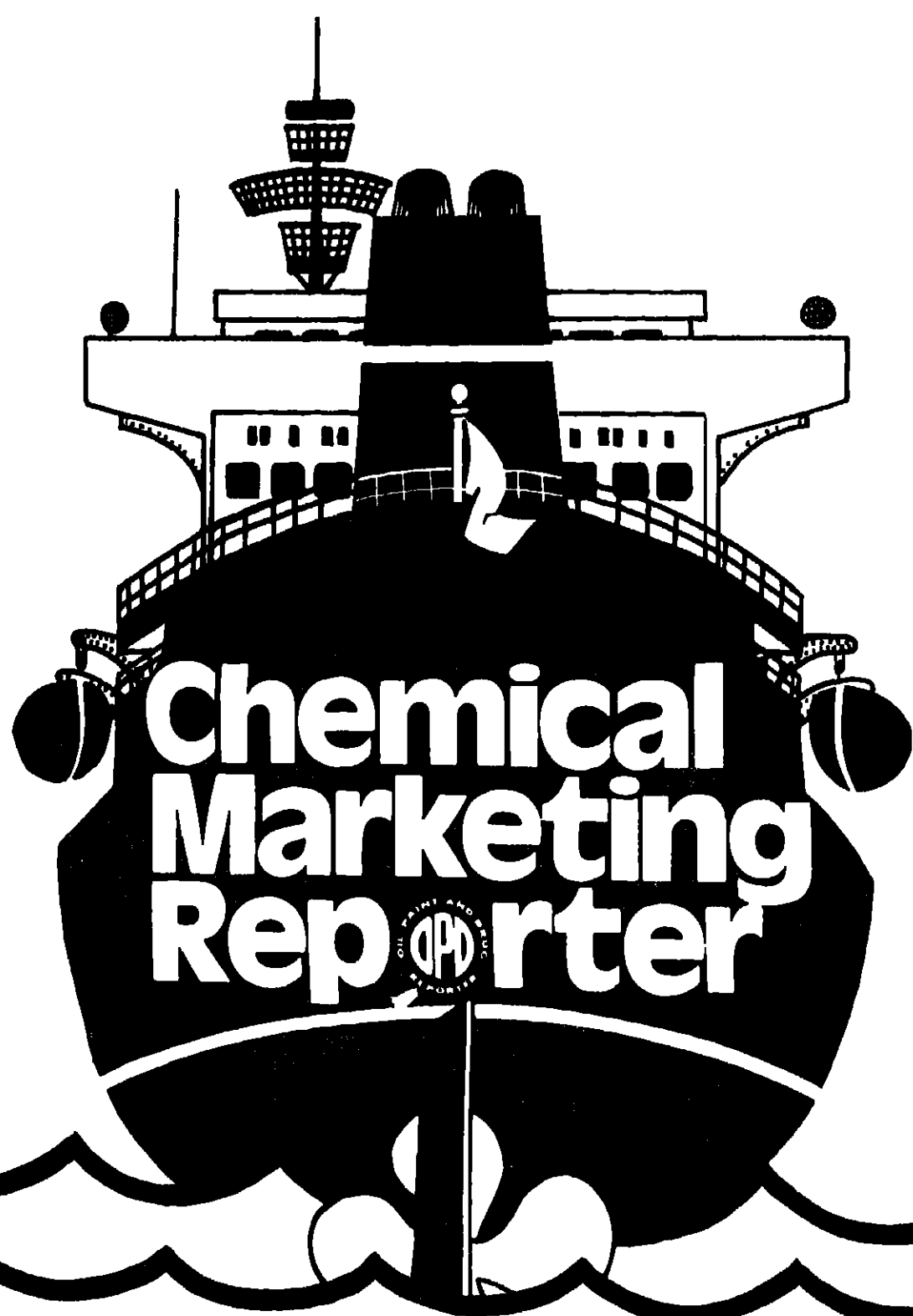
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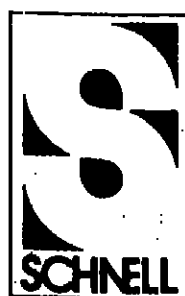
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COATINGS & PLASTICS

Du Pont and SCM Raise Tabs for TiO₂ Next Quarter

Responding to higher production and raw material costs, and the rising expense of complying with RCRA environmental regulations, both E.I. du Pont de Nemours Inc. and the Pigments Division of SCM Corporation plan to increase list prices for anatase and rutile grades of titanium dioxide (TiO₂) effective October 1.

An earlier July price led by NL Industries, which imports TiO₂ from Canada and West Germany, was not followed by US producers; the last successful domestic price increase occurred in October 1985.

SCM Corporation will move its rutile grades up by 3 cents per pound and its anatase grades by 4 cents per pound; the firm will be eliminating discounts, making the actual increase several cents per pound higher for most customers. According to a spokesman for the company, the industry needs to raise selling prices to ensure adequate supplies in this cost-intensive market, where even temporary problems with one or two isolated plants can have devastating effects on supply.

NEW SELLING PRICES

Maximum quantities (i.e., 20 tons and up) of its "Zopaque" RG, RGM and HSS anatase pigments will sell for 78c. per pound and "Zopaque" RCL and RCS rutile grades will sell from 81 cents to 83 cents per pound.

Du Pont plans to increase prices by 2 cents per pound for rutile and 3 cents per pound for anatase. The average selling price for their rutile grades will be 77 cents per pound, and that for anatase, 80 cents per pound.

Kerr-McGee Corporation, which manufactures a synthetic-based TiO₂ using ilmenite, has not announced an increase, although company spokesmen concede that production costs have increased substantially within the past year.

Despite lower energy costs, producers report that costs of several key raw materials have increased substantially this year: costs of natural rutile, imported from a variety of sources including Canada, Africa and Australia, are said to have increased 12 to 30 percent over last year, reflecting cost of environmental compliance for ore miners.

Chlorine prices are up as well, producers relate. As the trend away from sulfate process to the environmentally sound chloride process, already complete in this country (only two domestic facilities out of nine currently use the sulfate process) becomes more pronounced worldwide, any change in chlorine prices is passed on to TiO₂ producers.

In addition, insurance and tax costs are reported to be up an additional 10 to 12 percent over last year.

The market is mature, but demand is strong, and expected to rise by 2 to 3 percent this year; different sources provide different projections — one producer expects it to move from 1985's 920,000 tons to between 930,000 and 940,000 tons this year; another reports that the demand last year was closer to 935,000 tons, and expects it to move up to around 965,000 tons.

Exports are expected to remain stable at last year's levels, as are imports.

Earlier in the year, analysts predicted a drop in import levels as the US dollar began to weaken. While sources indicate that several smaller producers in the Far East and Europe have dropped out of the market, they indicate that the large importers, particularly NL and TiO₂ Inc., are set on maintaining a strong market presence here, and are prepared to face shifting economic conditions.

As once source explains, imports are needed to keep an already delicate supply and demand situation in balance; any decrease in imports could worsen an already "squeaking" supply situation.

All major domestic producers are plan-

ning extensive capacity expansions.

SCM expanded its Stollingsborough UK plant last year and is considering converting its Australian plant to chloride process — it has been involved in extensive debottlenecking projects, and is considering future expansions, to be phased in slowly.

Kerr-McGee completed expansions at its

PRICES TRENDLINES

WEEK ENDING AUG. 29, 1986

CHANGES/UP

None

CHANGES/DOWN

None

COATINGS INDEX

The Coatings & Plastics Index reflects the prices of 13 representative materials in this sector and the quantity of each produced in 1985.

Aug. 29, 1986	306.4
Aug. 22, 1986	306.4
July 31, 1986	306.4
Sept. 2, 1986	306.4

Chemical Prices Start on Page 34

Hamilton, Miss., plant during the first quarter of 1986, and is considering additional expansions there in the future; the firm is also trying to license new production technology overseas, a company source states.

Du Pont is planning new operations "everywhere," according to a spokesman. In a well-publicized move to add 50,000 tons to its domestic output by 1988, the company has initiated different debottlenecking projects at the firm's four domestic plants.

Similar projects are planned for its Mexican plant, where the firm hopes to add 25,000 tons of capacity by 1988. New plants are scheduled to open in Taiwan in 1989, and in Korea and Brazil in 1990.

ENVIRONMENTAL PROTESTS

The firm had reportedly been having trouble getting construction of its chloride process plant underway in Taiwan, as local environmental groups protested (CMR, 7/14/86 p. 6). Fishermen and farmers in the area, worried about the effects the Du Pont plant might have on the ecosystem pressured officials into ordering the firm to prepare an extensive environmental impact study to assess possible damage before allowing construction to begin.

As a company source explains it, the situation experienced with the Taiwan plant is not a new one — virtually every new TiO₂ plant opening has met with protest from local environmental groups. It took four years to get the Mississippi plant opened.

In an attempt to demonstrate its good will, the company invited between 20 and 30 delegates from Taiwanese environmental groups to tour Du Pont's Delaware and Mississippi plants, to speak with federal and state legislators and environmentalists; this should continue until next year, by which time construction should begin. Cooperation with environmental groups is now accepted as an inherent part of new TiO₂ plant construction.

Supply levels are extremely tight. Some producers report that their customers are allowing four to six weeks for delivery. Those who have been able to keep up with orders cite increased cooperation with customers.

Capacity utilization is said to range from 95 to 100 percent of nameplate; one firm reports that its debottlenecking project has enabled it to operate at rates even slightly above published capacity. They feel

Continued on Page 20

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September 1, 1986

CHEMICAL MARKETING REPORTER

33

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An Index of weekly chemical market reports is on the back cover.

Abies alba, oil, cns.	lb.	15.00	-
Acetic anhydride, 99%, tanks, frt. a/cd.	lb.	.37	-
Prices 1% higher in West.			
Acetaminophen (see N-Acetyl-p-aminophenol)			
Acetanilide, tech, flaked, bgs, t.l., f.o.b.	lb.	1.29	-
Acetic acid, tech., tanks, d/vd.	lb.	.26	-
Acetic anhydride, tanks, d/vd.	lb.	.43%	-
Acetylacrylate, prices 1% higher in West.			
Acetone, tech., d/vd.	lb.	1.29	-
Acetoacetyl-p-anilide, dms., t.l., d/vd.	lb.	2.70	-
Acetoacetyl-p-chloranilide, dms., t.l., d/vd.	lb.	2.86	-
Acetoacetyl-p-toluidide, dms., t.l., d/vd.	lb.	1.58	-
Acetoacetyl-m-xylylide, dms., t.l., d/vd.	lb.	3.39	-
Acetone, tanks, d/vd.	lb.	.26	-
d/vd. Zone 2 (C&I)	lb.	.27	-
d/vd. Zone 3 (W. of Rockies exclud- ing Calif.)	lb.	.27	-
Acetonilide, tanks, frt. a/cd.	lb.	.53	.54%
Acetophenidin (see Phenacetin)			
Acetophenone, tech., tanks, f.o.b.	lb.	2.75	.85
acetone, tanks, frt. a/cd.	lb.	.26	-
N-Acetyl-p-aminophenol, c.i., t.l. works.	kilo	5.95	6.64
Acetylene black, imp., 50% com- pressed, 12 1/2 lbs. c.i., t.l. frt. extra.	lb.	.96	-
100%, 25-lb. bgs., same ba- sis	lb.	.95%	-
Acetylene bromide, tanks, f.o.b.	lb.	1.28	-
Acetylene, tanks, f.o.b.	lb.	.97	-
Acetylsalicylic acid, USP (see Aspirin)			
Acetyltrinitrate, citrate, bulk, f.o.b.	lb.	2.98	-
Acetyltrinitrate, citrate, bulk, f.o.b.	lb.	2.08	-
Acetrolin, tech., tanks, d/vd.	lb.	1.00	-
Acetanilide, solid, t.l. works.	lb.	1.22	-
Acetone, 100% abs., tanks, w/rt.	lb.	.74	.77
Acrylic acid, glacial, reg., tanks, d/vd.	lb.	.87	-
Acrylic acid, solid, tanks, d/vd.	lb.	.80	-
Acrylonitrile, tanks, works.	lb.	.39%	.45%
Acrylonitrile-butadiene-styrene resin, high-impact, nat. t.l., dms., d/vd.	lb.	1.09	1.12
medium-impact, nat. t.l., dms.	lb.	1.05	1.08
low-impact, nat., same basis	lb.	.98	1.01
Adipic acid, resin grade, bulk, hopper cars, frt. equal.	lb.	.67	-
C-10 to C-15, tanks, d/vd.	lb.	.71	-
Agar USP, powd., 80 to 100 mesh.	lb.	9.50	9.85
Alcohol, syn. C-8 to C-10, tanks, f.o.b.	lb.	.38	-
C-12 to C-13, tanks, d/vd.	lb.	.57	.69
C-14 to C-15, tanks, d/vd.	lb.	.57	-
C-16 to C-17, tanks, d/vd.	lb.	.60	-
Aldehydes, C-8, dms., tanks, d/vd.	lb.	4.10	6.70
C-7, dms.	lb.	3.95	-
C-8, dms.	lb.	4.30	6.30
C-10, dms.	lb.	4.30	5.35
Algin (see Sodium alginate)			
Alkal blue, dry, flaked, 110-lb. dms.	lb.	3.72	3.83
Alkal blue, prices to higher W. of Rockies			
Allspice Guatemalan / Honduran, bgs.	lb.	.88	-
Jamaican, bgs.	lb.	1.05	-
Allyl acetate, tanks, f.o.b. Bayport, Tex.	lb.	.80	-
Allyl bromide, 500-lb. dms., 2,000 lbs. or more, works.	lb.	5.50	-
Allyl chloride, 25-lb. c.i., t.l. works.	lb.	3.95	4.50
Allyl chloride, tanks, f.o.b. works.	lb.	.85	-
Allyl isothiocyanate, bts.	lb.	5.40	6.90
Arnica, of, a/cd., bitter (see Benzaldehyde)			
Almond, oil, nat. bitter, NF (f.p.a.) bts.	lb.	3.60	3.60
sweet	lb.	1.24	1.60
Alota, Caps, bts.	lb.	2.00	-
Alum, potash, tech. gran.	lb.	2.25	2.75
Cureco, bgs.	lb.	2.60	-
powd., bgs.	lb.	3.00	-
Alum, NF, dms.	lb.	8.00	8.70
Alum, potash, tech. gran.	lb.	35.00	-
c.i., t.l. works	lb.	58.00	-
FCC powd., 100 lbs. works/100 lbs.	lb.	36.00	-
Alum, potassium, tech. gran. bgs, c.i.	lb.	58.00	-
FCC powd., 100 lbs. works/100 lbs.	lb.	36.00	-
FCC gran., 100 lbs. works/100 lbs.	lb.	58.00	-

Alumina, activated, gran., 100-lb. bgs.		821.00
40-60-mesh, min. c.l. works ton		354.00
calcined, bulk, same basis	ton	380.00
100-lb. bgs., same basis	ton	
hydrated, white, bulk, same basis		190.00
..... 100-lb. bgs., same basis	ton	224.00
Aluminum acetate, basic, dms., l.c.l. works	lb.	3.25
Aluminum chloride, anhyd., soln., 500- 600 lb. dms., l.c.l. works frt. aquad.	lb.	.50
bulk, same basis	lb.	.4675
same-but bulk, same basis	lb.	.48
Aluminum chloride, concn., 30% tankas, works	100 lbs.	16.00
ret. dms., c.l., works	100 lbs.	12.00
non-ret. dms., same basis	100 lbs.	20.00
Aluminum nitrate, 10% basic, liq. 8% base, l.c.l. works	lb.	.55
Aluminum hydrate (see Alumina, hydrated)		
Aluminum hydroxide, dried, gel, NF, 75-85 dms., c.l., l.c.l. works, lb.		2.75
Aluminum metal, 80% or more, 30-lb. pigs., 30,000-lb. lots, frt.		
acid	lb.	.76
Aluminum oxide amorphous (see Alumina, calcined).		
Aluminum oxide, feeding grade, acid, lining, 2,400 lb. lots,		
dvd.	lb.	1.40
lining, extra-fine, same basis	lb.	1.98
Aluminum silicate, kaolin, pure, 100- lb. dms., l.c.l.	lb.	6.46
Aluminum powder, leading grade, std. lining, 2,400 lb. lots, dvd.	lb.	3.17
extra fine, feeding, same basis	lb.	4.04
Aluminum stearate, 80% or more, 30-lb. pigs., l.c.l. works	lb.	1.25
Aluminum sulfate, concn., grad., 100 lb. bgs., c.l., work, frt. equalized, basis 17% Al ₂ O ₃ , East and Gulf Coast	ton	185.00
West Coast	ton	217.80
liq. tanks, N.E. same basis	ton	145.00
iron-free, dry, bps., c.l. same basis, l.c.l. works	ton	320.00
liq. tanks, same basis	ton	.00
Aluminum sulfate, USP, gran., dms. lb. Armoniac acid, USP, gran., 20,000 lbs., l.c.l. works	lb.	2.12
tech., l.c.l. same basis	lb.	1.88
p-Aminobenzoic acid, 1,000 kilos or more, l.c.l. works, l.c.l. works, kilo		9.80
2-Amino-naphthalene dry and grad., 14,000 lbs. or more, frt. eqd.	lb.	5.79
Aminoethyl ethanediimine, tanks, frt. cashed	lb.	1.3375
N-Amino-N-phosphor-tetrazole, l.c.l., frt. collect.	lb.	1.05
2-Methyl-2-ethyl-1,3-propanediol, 100 lb., l.c.l. works	lb.	1.82

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

al/alpha	C/Cantigrade	E/East
alld/slowed	chys./conveys	e./end point
amorph./amorphous	c.o./cable carrier	equaled./equalized
AMP/American melling	CD/completely den-	exs./expressed
point	stured	ext./extracted
amyd./amygdrous	d./dial./coat insurance	
AOCAC/Association of	eight	F/Fahrenheit
Official Agricultural	o./oiled	f.a.s./free alongside
Chemicals	one./oans	ferment./fermentation
a.p.a./available phos-	con./commercial	f.f.s./free fatty acid
phoric acid	coro./corrosciated	f.f.s./free from chlorine
approx./approximately	cp/corrosive	f.f.s./free from prus-
acid	cpa./corrosives	sic acid
ASTMA/American Soci-	cayn./caynoline	fb./fiber
ety for Testing &	in loc./in loco	f.o.b./free on board
Materials	stra./cartons	f./floating point
	cyle./cylinders	fr./freight
b/beta		g/gallon
b/Baum	d./dentro	g./gallon
table, barrels	d./double	g.p./general purpose
b.p./beta-gamma	denat./denatured	gran./granular
b.p./beta-gamma	dest./destro	gr./ground
dis./denies	thly distilled	
bois./boisies	d./distro-lyso	l.b./lithelial boiling
b.p./boiling point	d./distro-lyso	point
b.p./boise phosphate	dis./distro-lyso	imp./imported
of lime	dis./distro-lyso	
b.b./boiling range	dis./distro-lyso	
bis./bisous	dis./distro-lyso	

incl./included
 indust./industrial
 kgs./kings
 L./lower
 lb./pound
 L./less
 L.L./less truckload
 liq./liquid
 m./meta
 m.a.p./mixed airline
 point
 mg./microgram
 mfr./manufacturers
 min./minimum
 molt./moltion
 m.p./melting point
 nitrogen
 n./normal
 nfr./normal
 nmt./neutral
 N./National Formulary
 No./number
 Non./nonionic
 o./ortho
 ord./ordinary
 oz./ounce
 P/phosphorus
 p./para
 Pac./Pacific
 of./of
 phos./phosphate
 phos./phosphate
 pkgs./packages
 pord./powdered
 phos./precipitated
 prod./producer
 pl./point
 pnt./punctured
 purt./purified
 redst./refilled
 redt./refined
 refy./refinery
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 rd./reducible
 rd./reducible
 90/percentage delivered
 s./single distilled
 SE./Southwest
 sec./secondary
 secs./seconds
 sp.g./specific gravity
 ship./shipment
 sol./solution
 std./standard
 syn./synthetic
 tanks./technical tanks
 tech./technical
 tert./tertiary
 T.L./trucksload
 tons./tons to short ton
 to./to and pounds
 TVA./Temporary
 tory./temporary
 lve./allowance
 U.S./United States
 Pharm./Pharmaceuticals
 via./via
 VMAP./Vaporization
 material
 a./air
 W./West
 wise./wise
 W./water
 W./water

[illegible][illegible]

Calcium carbide, acid, generator also, bulk, c.i., f.o.b. works,	402.00	-
Calcium carbonate, pulverized, 325-mesh, bgs., bulk, f.o.b. works,	34.50	-
alumina, 54% silica, same basis,	167.00	-
72% solids, same basis,	98.00	-
quicklime, gran. ind., bulk, work- s,	67.00	-
Calcium carbonate, coated, bgs., c.i., works,0742	1360
Calcium carbonate, precip., bgs., c.i.,	370.00	430.00
Calcium carbonate precip. medium, bgs., c.i. works,	95.00	140.00
precip. dense, bgs., c.i., surface treated, bgs., c.i., works,	195.00	-
ultrafine, USP, bgs., c.i., works,	180.00	170.00
Calcium chloride, conc. reg. grade 77- 80%, flake, bulk, c.i., works,	183.00	-
100-lb. bgs., c.i., same basis,	196.00	-
anhyd., 94-97%, flake or pellet, bulk, c.i., same basis,	217.00	-
80-lb. bgs., c.i., same basis,	275.00	-
briny grade, 80-lb. bgs.,	285.00	-
Calcium chloride, liq., 100 percent ba- se, t.t., l., barge,	99.75	-
48% same basis,	116.00	-
Calcium chloride, USP, gran., 225-lb. dms., U. S. ref.,30	-
Calcium citrate, purif., 200-lb. cts., 10,000 lbs. or more, f.o.b. works,	3.82	-
Calcium cyanamide, indust., anhyd., dms. works,	400.00	450.00
Calcium gluconate, USP powder, U. S. ref.,	1.93	-
Calcium hydride, lump, dms., 25- 1,000-lb. lots, works,	10.50	13.25
Calcium hypochlorite, 100-lb. dms., truckloads ship. U. S. of Mex- ico, 100-lb. lots,	92.40	-
Calcium hypophosphite, dms., bulk, 500 kilos or more,	13.75	14.50
Calcium iodide, FCC dms., f.o.b. works,	5.80	-
Calcium iodide, 80-dms., f.o.b. works,	23.85	26.95
Calcium lactate, NF, powder, pentahy- drate, dms., 24,000 lbs. or more, f.o.b. works,	2.00	-
NF, gran., hydrate, same basis, U. S. special grade, chd grade, same ba- sis,	2.10	-
Calcium naphthenate, liq., 4% Ca., c.i., f.o.b. plant, E. of Rockies,	2.80	-
d-Calcium pentanoate, USP, 100- 500-kilo lots,85	-
d-Calcium pentanoate, lease grade, f.o.b. frt. afd., 250 kilos or more,	10.50	11.50
d-Calcium pentanoate, calcium ethyl- oxide complex, lease grade, 100 grams per lb., f.o.b. frt. afd., 500 lbs. or more,	8.00	8.50
Calcium phosphate, dibasic, lease grade, 519% P, bulk, c.i., U. S. ref.,	2.75	-
Calcium phosphate, dibasic, dihydrate, USP, bgs., c.i., U. S. works, frt. equad.,	22.50	-
anhyd., USP, same basis, 100 ba- seline grade, same basis,	71.75	-
Calcium phosphate, monobasic, monohydrate, food grade, bgs., c.i., U. S. works, frt. equad.,	49.90	-
anhyd., food grade, same ba- sis,	50.50	-
tribasic, NF precip., bgs., c.i., frt. equad.,	54.95	-
Calcium propionate, dms., 2,000 lb. or more, f.o.b. bulk,	62.50	-
Calcium silicate, hydrated, bgs., c.i., works,50	.55
Calcium silicate paint grade (see Wollastonite).	.07	-
Calcium, NF, acid powder, 100-lb. dms., U. S. ref.,850	-
Camphene chlorinated, 67-69% (see Terephthal- ene).	2.85	3.70
Camphor, monobrominated, dms.,	2.85	3.70
Carbon Black, low structure, bulk, c.i. works,240	-
bgs., c.i. works,270	-
intermediate super-abrasion (SAP),25	-
bgs., c.i. works,28	-
super-abrasion (SAP), bulk, c.i., works,31	-
bgs., c.i. works,4050	-
semi-reinforcing (SRF), bulk, c.i., works,210	-
bgs., c.i. works,240	-
Carbon black, thermal, medium, bgs., c.i., works,30	-
bulk, c.i. works,32	-
Carbon black oil, barge, f.o.b. Gulf re- fineries,	10.50	-
U. S. W. coast refineries,	10.50	-
Carbon disulfide, ton, f.o.b. works, ton or more,	420.00	-
Carbon tetrachloride, CP, consumers, dms., c.i., frt. afd.,36	-
tech. dms., c.i., frt. afd.,31	-
tank transport (min. 4,000 gals.) frt. afd.,24	-
Carboxymethyl cellulose (see CMC).	75.00	1.01
Cardium of NF, bolts,	3.00	-
Cardamom, decoct., Guatemala, I., green, Guatemala, lbs.,	6.25	-
Camrins, No. 40, NF, bulk, 100-lb. lots or more, dms.,	135.00	-
Camruba wax, Pemahyba, No. 1, yel- low, bgs., ton lots,	1.85	-
Ceara, No. 1, yellow, bgs., ton lots,	1.75	-
North Country, No. 2, refined, bgs., ton lots,	1.55	-
Camruba wax, North Country No. 3, centrifuged, bgs., ton lots or North Country No. 3, refined, bgs., ton lots,	1.10	1.30
Powdered Camruba, 20c. to 100 mesh, 20c. per lb. higher	-	-
b-Carotene, hydrocarbon, refined, solid suspension, 400,000 A units per gram, 33-lbs. or more, l., b-Carotene, liq., in vegetable oil, 500,000 A units per gram, 33 lbs. or more,	32.75	40.75
b-Carotene, dry, beads, 100, 167,000 A units per gram 50-lb. cts. lbs. d-Carvone, 25-ds. dms., syn.,	28.85	48.00
d-Carvone,	1.90	-
Cassia, nigra, bulk, c.i., works,	7.00	-
Cassia, imp., acid-precip., grad., 30- mesh, Australian, editole, same basis, c.i.,	1.45	-
Australian, indus. same basis, c.i.,	1.365	-
Cassette acid, 303 mol. wt., dms., frt. afd., 100% basic,	3.70	-

Carbon black, low structure, bulk, c.i., works.....	lb.	240	2
bags, c.i. works.....	lb.	275	
intermediate-super-abrasion (M.F.).....	lb.	26	
bags, c.i. works.....	lb.	28	
super-abrasion (SAF), bulk, c.i., works.....	lb.	31	
bags, c.i. works.....	lb.	4050	
semi-reinforcing (SRF), bulk, c.i., works.....	lb.	210	
bags, c.i. works.....	lb.	240	
Carbon black, thermal, medium, bags, c.i. works.....	lb.	30	
bulk, c.i. works.....	lb.	32	
Carbon black oil, barge, 10-15 Gall. refineries.....	bbls.	10.50	12
L.o.b. w/ coast ref. oil.....	bbls.	10.50	12
Carbon disulfide, l.c., c.o.b. works ton tank, tr. alt.....	lb.	420.00	
Carbon tetrachloride, C.F., consumers, tank, tr. alt.....	lb.	36	
tech. c.i., l.c., l.f., c.o.b. works, tank, transport (min. 4,000 gals.) fr. alt.....	lb.	24	
Carboxymethylcellulose (see CMC)			
Cardamom, NF, lots.....	lb.	75.00	100
Cardamom, desert, Guatemala, c.i. green, Guatemala, bags.....	lb.	6.25	9
Caroline, No. 40, NF, bulk, 100-lb. lots or more, dry.....	lb.	135.00	140
Canada wax, Paraffin, 2, 4, 6, 8, low, bags, ton lots.....	lb.	1.85	2
Ceara, No. 1, yellow, bags, ton lots.....	lb.	1.75	
North Country, No. 2, refined, bags, ton lots.....	lb.	1.55	
Carnauba wax, North Country No. 3, centrifuged, bags, ton lots to North Country, No. 3, refined, bags, ton lots.....	lb.	1.30	
Powdered carnauba wax, 20 to 100 mesh, 20c. per lb. higher			
b-Carotene, investigatable, C.F. solids per gram, 33-lbs. or more.....	lb.	32.75	
b-Carotene, lliq. in vegetable oil, 500,000 A units per gram, 33 lbs. or more.....	lb.	40.75	
b-Carotene, dry, beads, 10%, 157,000 A units per gram, 50-lb. cns. lb.	lb.	28.85	
d-Carotene, 25-lb. dms., syn.....	lb.	49.00	
i-Carotene.....	lb.	7.00	
Casarex, segmented, bulk.....	lb.	1.00	
Caseln, imp., acid-procp., grd., 30-mesh, Australian, edible, same base, c.i.	lb.	1.45	
Australian, medical, same base, c.i.	lb.	1.365	
Cassella acid, 303 mol. wt., dms., fr. alt., 100% basis.....	lb.	3.70	
Cassella "trial" "A" bags.....	lb.	72	
"B" bags.....	lb.	72	
Caster oil, raw, No. 1, Braz. tanks.....	lb.	32	
USP-9 dms.....	lb.	74	
retd. dms., 5-9 dms.....	lb.	76	
blem. 9 dms.....	lb.	75	
dehydrated, bodied, tanks.....	lb.	74	
dehydrated, unbodied, tanks.....	lb.	65	
Caster oil, acids dehydrated, dms. lb.	lb.	79 1/2	
Caster pomace, bags, container load, l.o.b., Miami, Fla.....	ton	154.00	
Castoreum, nat., cns.....	lb.	18.00	
syn, cns.....	lb.	11.00	
Castor oil, CP, 45-48c dms., 50-239 cns, l.o.b.....	lb.	7.93	
tech., bags, l.i., same basis.....	lb.	3.71	
Caster polish (see Castor Oil)			
Cassia acids (see Soda, alums)			
Caster oil, dms.....	lb.	17.50	
Cedarwood oil, Texas, dms., cns.....	lb.	3.50	
Cedra, c.i. dms.....	lb.	3.79	
Virginie.....	lb.	6.25	
Acetyl acetate, dist., dms.....	lb.	4.25	
Celery seed, Indian, bags.....	lb.	48	
Celery seed oil.....	lb.	60.00	
Celery acetate, dms.....	lb.	1.30	
divd. E.....	lb.	1.30	
Cellulose acetate butyrate, povd., 17% butyl content, bags, l.i., wtd. E.....	lb.	1.75	
88% butyl content, bags, divd. E.....	lb.	1.59	
60% butyl content, bags, divd. E.....	lb.	1.81	
65% butyl content, bags, divd. E.....	lb.	1.53	
Celulose gum, povd., 24-100 lb. lots or more works, l.o.b., Hopewell, Va.....	lb.	1.60	
std. low or medium vis., bags, c.i., l.i., l.o.b.....	lb.	1.50	
Carbonic concentrate CO ₂ , 50 lbs.....	lb.	1.35	
Cerium hydrogenate 80% CeO ₂ dms., works.....	lb.	6.40	
77% CeO ₂ dms., works.....	lb.	4.20	
Cerium chloride, optically active, l.i. lots or more, divd.....	lb.	1.85	
Any alcohol, HF, cns, c.i., l.i., divd. E.....	lb.	.58 1/2	
Chalk (see Calcium carbonates)			
Chamomile flowers, Hungarian, cs. 21 Roman, cs.....	lb.	4.25	
Roman, cs.....	lb.	4.84	
Egyptian, whole.....	lb.	2.70	
Chamomile oil, blue, Egyptian.....	lb.	545.00	
blue, Hungarian.....	lb.	370.50	
Chicory root, dry, bbls.....	lb.	15.00	
Chicogo acid, dry, bbls., fr. alt.....	lb.	13.50	
Chiles (see Pepper, red)			
Chloride anhydride, tech., dms., l.i., works.....	lb.	1.50	
Chlorinated paraffin, 40% chlorine, bulk, divd., Zone 1.....	lb.	.46	
60% chlorine, same basis.....	lb.	.48	
80% chlorine, same basis.....	lb.	.49 1/2	
70% chlorine, resalious, 50-lb. divd., divd., Zone 1.....	lb.	.69	

CHEMICAL MARKETING RE

RTTB

Lithium fluoride, caps., o.i., t.i., divd., lb.	2.84
Lithium fluoride, caps., o.i., t.i., divd., lb.	4.80

Manganese naphthenate, 6% Mn, 67

328

b-Naphthol, tech. liq., 60-65% 1,10

September 1, 1986 CHI

ICAL MARKETING REPORTER

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WEEK ENDING AUGUST 29, 1986

Barbinaethyddau, dr. claspwrdd

Perchloroethylene, dry cleaning grade, dist. tanks, dhd.	201	-	-
Indust. grade, constr. tanks, dhd. ....	.31	-	-
Permethrin, dhd.	2.65	-	-
Paraffin, dist. 28, (par. 48), calcium salts, dmd. and, alt.	5.26	-	-
butyl salts, same basis.	5.26	-	-
Pearl salts, f.o.b.	3.26	-	-
Pellagra, Paraguay	6.76	8.25	-
Petrolatum, USP, 37 1/2, tanks, c.l. rely. ....	.375	-	-
tanks, rely. ....	.310	-	-
USP, soft white, dms., c.l. rely. ....	.375	-	-
Petrolatum, USP, 37 1/2, tanks, c.l. rely. ....	.310	-	-
USP, fly white, dms., c.l. rely. ....	.370	-	-
Petrolatum, USP, 37 1/2, tanks, rely. ....	.305	-	-
USP, cream, dms., c.l. rely. ....	.365	-	-
tanks, rely. ....	.350	-	-
USP, soft yellow, dms., c.l. rely. ....	.350	-	-
tanks, rely. ....	.285	-	-
USP, amber, dms., c.l. rely. ....	.345	-	-
tanks, rely. ....	.260	-	-
Petroleum pitch (see Asphalt, petroleum)	-	-	-
Petroleum sulfonic acid, 50-92%, autonic cont. RMV, bulk, tanks.	48 1/2	49	-
MMW, same basis.	49	-	-
LMW, same basis.	49	-	-
Prices for 51% sulfonic content 20 per lb. lower on core-	-	-	-
phensulfonic molecules was	-	-	-
Phenacetin, USP, 99.5%, dms., 1,000-lb. lots, dhd.	2.20	-	-
100-lb. lots, 1,000-lb. lots, dhd.	2.22	2.45	-
Phenacetin, dms., c.l. f.o.b.	2.20	-	-
Phenobarbital, USP, 99.5%, 500-kg. lots, f.o.b. works	19.50	-	-
Phenobarbital, sodium, NF, 500-kg. lots, f.o.b. works	27.00	-	-
Phenol, syn. tanks, fr. equiv. 25-lb. cts.	25	28	-
p-Phenolsulfonic acid, 95% sol'n, dms., c.l., lob works ....	.58	-	-
tanks, same basis. ....	.64	-	-
Phenolphthalein, indust. grade, 50-lb. bags, c.l., f.o.b. works	2.63	-	-
purif. grade, same basis.	2.29	-	-
Phenyl acetate, dms., 100-lb. lots, works	1.04	-	-
Phenylacetic acid, pure crys., 25-lb. cts.	4.50	-	-
di-Phenylalanine, dms., 25-kg. lots	34.00	-	-
1-Phenyl-3-carboxyphenyl pyrazole, dms., 200-lb. lots, dhd. E.	8.45	-	-
m-Phenylenediamine, cast, dms., c.l., 1, 1, 1, f.o.b. works	2.07	-	-
p-Phenylenediamine, flaked, dms., f.o.b. works	3.25	-	-
p-Phenylenediamine, flaked, dms., 100-lb. works	4.00	-	-
Phenylphenyl hydrocarbon, USP, 100-kg. lots or more	175.00	165.00	-
Phenylphenyl acetate, dms.	3.35	-	-
p-Phenylphenyl alcohol, NF, dms.	2.65	3.40	-
p-Phenylphenyl, dms., 30,000 lbs. or more, fr. alt.	1.50	-	-
Phenylethylphenyl acetate, 25-lb. cts.	5.50	6.80	-
Phenylethylphenyl, acid	3.60	-	-
Phenylpyrazine, 99% min., dms.	1.80	-	-
1-Phenyl-3-methyl-5-pyrazolone, dms., 250-lb. lots dhd. E.	3.50	-	-
p-Phenylacet. dms., 1, 1, 1, f.o.b. works	1.35	2.00	-
p-Phenylphenol, bgs., 1, 1, 40,000 lbs. or more, works	1.85	-	-
Phenylpropanolamine hydrochloride, 100-kg. lots, dms.	24.00	28.00	-
Phenylsulfonate, purif. crys., dms. E.	2.75	-	-
tech. crys., E.	2.25	-	-
Phenyl E.	2.35	-	-
Phloxine toner (red 90), dms.	1.85	2.05	-
Phosgene, 1-ton ret. cys., 5 to 6-cyl. quantities, works ....	.55	.87	-
Phosphatidic acid, Fla., land peat, 100 lb. minewashed, 65-85% b.p.t. bulk c.l. minew.	23.15	-	-
ton vassal. Tanks, same basis, 100 lbs.	28.00	-	-
Phosphoric acid, com'l and, constr. grades, 75% tanks, 100 lbs.	29.00	-	-
80% tanks, 100 lbs.	31.00	-	-
55% N.F. tanks, 100 lbs.	33.50	-	-
equiv., 100-lb.	33.50	-	-
Food grade prices \$2.00 above tech. grade.	-	-	-
Phosphoric acid, agricultural grade, 52-54% 8 & 9, f.o.b. tanks, works	3.10	-	-
super, min. 70% s.p.a., same basis, 100-lb.	3.45	-	-
Phosphorus, dms. yellow, 100-lb. cts., works, fr. equiv.	1.00	-	-
tanks, works, f.o.b. works ....	.91	-	-
Phosphorus oxychloride, tanks, fr. equiv. ....	.40	-	-
Phosphorus pentasulfide, powd., dms., c.l. works, 100 lbs.	50.00	-	-
100 lbs.	45.00	-	-
Phosphorus pentoxide, dms., 1, 1, works ....	.82	-	-
Phosphorus sesquisulfide, dms., ovs., c.l. works ....	.38	-	-
Phosphorus trichloride, dms., 1, 1, works ....	.40	-	-
Phthalic anhydride, flake, c.l., 1, dms., fr. equiv. ....	.35	335	323
mofen, tanks, same basis ....	.27	323	323
Prices 1-1 1/2¢ per lb. higher on the West Coast	-	-	-
Phthalimide, lake, works ....	.85	-	-
Phthalocyanine toner, 100-lb. bags, fr. alt. E. of Rockies	8.10	8.60	-
green shade, same basis	8.40	8.60	-
resinated, bds., same basis	8.20	8.75	-
ais, f.o.b. Charlotte, N.C., 1, 1, lb.	5.00	-	-
Pigment green B, bgs.	2.20	-	-
Picophae hydrochloride, USP, dms.	1,500.00	2,000.00	-
Pimento see Allspice	-	-	-
Pimento leaf oil, dms.	14.50	-	-
Pine oil, 80% min. alcohol content, bulk, f.o.b. works, 100 lbs.	47.00	53.00	-
dms., c.l., 1, 1, same basis, 100 lbs.	51.00	54.00	-
a-Phene, perfume grade, 100-lb. cts.	1.82	-	-
tech. grade, 100-lb. cts.	1.68	.23	-
p-Phene, perfume grade, 100-lb. cts.	2.30	-	-
tech. grade, tanks, 100-lb. cts. ....	.35	.40	-
Piperazine, anhyd., dms., 1, 1, fr. alt.	1.80	-	-
Piperazine dires., 30% min., 100-lb. lots, fr. alt.	2.25	2.35	-
Piperazine dihydrochloride, 53%, dms., 1, 1, fr. alt.	2.00	-	-
Piperazine lavulytic acid, dms., 1, 1, 100-lb. lots, fr. alt.	1.80	-	-
Piperazine phosphate, 42%, dms., 1, 1, fr. alt.	1.80	-	-
Piperidine dist., 98% min., dms., c.l., 1, works	8.92	-	-
Piperonyl butoxide dms., dhd. E.	5.00	-	-
Platinum, metal, works	630.00	-	-
Polycarbonate resin, pellets, nat., 1, 1, works	1.84	1.68	-
Polyester resin, unsaturated, g.p., 1, 1, phthalic, bulk, tanks, fr. alt. ....	.61	.53	-
isophthalic, same basis, 100-lb. cts. ....	.58	.62	-
Polyethylene resin, high-density, film molding, g.p., hopper cars, fr. alt. ....	.43	.46	-
injection molding, g.p., hopper cars, fr. alt. ....	.43	.48	-
extrusion, g.p., hopper cars, same basis ....	.47	.48	-
wire and cable, nat. hopper cars, same basis ....	.45	.49	-
wire and cable, cable, same basis ....	.55 1/2	.57	-
Polyethylene resin, low-density, film extrusion, g.p., hopper cars, fr. alt. ....	.38	-	-
clarity film, hopper cars, fr. alt. ....	.37	-	-
pellet extrusion film, hopper cars, same basis ....	.35	-	-
extrusion coating, hopper cars, same basis ....	.38	.42	-
g.p., hopper cars, same basis ....	.38	.42	-
Polyethylene resin, low-density, g.p., fr. liner low-density g.p. resin ....	.36	.40	-
blown film resin ....	.40	.43 1/2	-
cast film resin ....	.40	.45	-
Polyethylene resin, low-density, injection molding, g.p., hopper cars, same basis ....	.45	.48	-
line wire, CATV, power cable, 1, 1, wire cable thermoplastic high voltage, natural gas, same basis ....	.647	-	-
wire and cable, XLPE low voltage, 14% carbon black, same basis ....	.87 1/2	.72 1/2	-
wire and cable jacketing, bulk, 1, 1, same basis ....	.587	.587	-
Polyvinyl acetate, USP, bulk, 50-billion unit min. ....	.52	-	-
Polyoxymethylene resin, 100-lb. cts. ....	.73	-	-
terate, dms., 20,000-lb. lots, works ....	.73	-	-
Polyoxyethylene sorbitol tetrastearate, 20, 000-lb. lots, works ....	.73	-	-
Polypropylene resin, homopolymer, g.p., nat., 1, 1, fr. alt. ....	.45	.48	-
copolymer, med. impact, nat., 1, 1, same basis ....	.50	.59	-
high impact, same basis ....	.53	.60	-
Colomandelal soc. perib. Higher for grade	-	-	-
Polypropylene resin, crys., nat., hopper cars, fr. alt. ....	.48	-	-
impact, nat., hopper cars, same basis ....	.81	-	-
high impact, high impact, same basis, same basis ....	.52	-	-
expandable beads (EPB), pigking grade, 1,000-lb. lots ....	.69	-	-
modified, same basis, 100-lb. cts. ....	.78	-	-
Polyvinyl alcohol, fully hydrolyzed, medium viscosity, bgs., 1, 1, dhd.	1.00	1.05	-
partially hydrolyzed, same basis, 1, 1, bgs., 1, 1, dhd.	1.05	-	-
Polyvinyl chloride resin, g.p., homopolymer dispersion, bgs., 1, 1, dhd. ....	.50	-	-
g.p. suspension, bulk, same basis ....	.38	-	-
g.p. resin, bulk, same basis ....	.47	-	-
film grade, bulk, same basis ....	.37	-	-
Polyvinyl chloride, g.p. copolymer dispersion, same basis ....	.58	.41	-
g.p. copolymer suspension, same basis ....	.48	.49	-
Poppyside Dutch, bgs. ....	.53	-	-
Urney, bgs. ....	.53	-	-
Polish caustic, 85% (see Potassium mulate).	-	-	-
Polish caustic, 85% 45% NaOH, 100-lb. works	18.00	-	-
West Coast, 50% basis, tanks, ext. terminal, 100 lbs.	18.00	-	-
reg. base, 55-62%, 400-s. dms., c.l., works	42.36	-	-
Potassium acetate, NF, gran., dms., 1, 1, works ....	.90	1.31	-
Potassium bicarbonate, USP, gran., bgs., c.l., works ....	.81 1/2	-	-
Potassium bicarbonate, USP, gran., 400-lb. cts. ....	.72	-	-
Potassium bichromate, 400-lb. cts., dms., c.l., works ....	.42	-	-

Potassium bitartrate, tech., dms., 11, 45	40		Potassium tetraborate, gran., bgs., c1.	1.10	
Potassium bitartrate, NF, gran., powd., 90	1.20		dms., same basis.	1.15	
Potassium borohydride, powd., dms., 18.00	20.00		Potassium tetraborate powder 15c per lb. higher	1.19	
Potassium bromate, gran., dms., 200-lb. dms., c1., f.o.b. works.	1.06	-	Potassium thiocyanate, USP, cryst., 25-lb. dms., 5-lb. lots.	4.01	
Potassium bromide, NF, gran., dms., 1.12	-		tech. cryst. dms., 1-lb. lots.	4.42	
Potassium carbonate, 47% K ₂ CO ₃ , tanks, 1-w. works.	15.40	-	Potassium titanate, cims., c1. works.	7.14	
dms., c1., 1-l. works.	20.65	-	Potassium-titanium fluoborate, tech. dms., 1-l. works.	1.24	1.06
calcined, 99-100% K ₂ CO ₃ , hopper c.a. or 100 lbs.	32.50	-	Potassium-zincum fluoride, tech. dms., 1-l. works.	1.12	
works.	36.40	-	Prednisone USP, dms., 5 kilos or more	1.03	-
bgs., c1., 1-l. works.	34.90	-	Prednisolone acetate, USP, dms., 5 kilos or more	1.12	-
Potassium carbonate, hydrated, 83-88% K ₂ CO ₃ , dms., c1., 1-l. works.	34.90	-	Prednisolone, anhyd., USP, dms., 5 kilos or more	1.12	-
bgs., c1., 1-l. works.	33.70	-	Procaine hydrochloride, USP, anhyd. grade, dms., 2,000-lb. lots, fr. alt.	4.95	5.1
Potassium carbonate, gran., purif., 400-lb. dms., 5-lb. lots.	40	46	Procaine hydrochloride, USP, ampu, grade, dms., 1,000-lb. lots, fr. alt.	4.96	5.1
Potassium chloride, cryst., dms., c1., 1-l. works.	1.44	-	Propylene glycol, tanks, f.o.b. works.	2.35	
Powd., dms., c1., 1-l. works.	30	-	Propionic acid, USP, pure, tanks, E.	33	34
Purif., gran., 325-lb. dms., f.o.b. shipping point.	40	-	n-Propyl acetate, tanks, divd.	33	34
Potassium persulfate, chemical grade, 99.95% K ₂ S ₂ O ₈ , tanks, f.o.b. works.	105.00	-	n-Propyl alcohol, tanks, divd.	32	31
USP, dms., 100 lbs.	1.12	-	n-Propyl glycol, tanks, 100 to 2,000-lb. lots, fr. alt.	11.50	-
USP, gran., dms.	.87	-	n-Propyl p-hydroxybenzoate, USP, 500 kilos	10.80	-
USP, powd., dms.	.87	-	tech., 50 kilos, f.o.b. East Coast	10.38	-
Potassium chloride, agri., tanks, 100 lbs. (Potassium muriate)	105.00	-	Propyl paraben (see n-Propyl-hydroxybenzoate)	10.38	-
Potassium chromate, purif., cryst., dms., works.	.57	-	Propyl thiocarb., cns., 50-kilo lots or more	55.00	-
Potassium citrate, NF, gran., 200-lb. dms., fr. alt.	93%	-	n-Propylamine, cns., c1. divd.	7.75	39
Potassium cyanide, dms., 20,000-lb. lots or more, f.o.b. works.	1.32	-	Propylene, polymer grade, f.o.b. Tex. and La. Gulf Coast points	.174	-
Potassium dichromate (see Potassium dichromate)	1.32	-	chemical grade same basis	.115	18
Potassium fluoroborate, tech., dms., c1., 1-l. works, fr. equid.	1.40	1.42	Propylene glycol, indust., tanks, f.o.b. East Coast	.40	41
Potassium fluoride, anhyd., dms., 1-l. works.	1.68	-	USP, tanks, f.o.b. E.	.43	41
Potassium gluconate, dms., 1-l. f.o.b. works.	1.45	-	Propylene glycol monomethyl ether, tanks, divd. E.	.49	-
Price W. of Denver 4c per lb. higher.	1.45	-	Propylene glycol, tanks, f.o.b. works, fr. equid.	.47%	-
Potassium guaiacolate, 300-lb. dms., 600 lbs. or more fr. equid.	2.10	-	Psyllium seed, USP, powd., bgs.	1.50	17
Potassium hydroxide, tech., dms., 100-lb. dms., c1., 1-l. works, fr. equid.	1.29	1.31	Pumice, dom., fine, 4-60, bgs., ton lots.	370.00	-
Potassium iodide, 1-l. gran., cryst., dms., 1,000-lb. lots, fr. alt.	10.72	12.39	medium, 2-15, 4-72, bgs., ton lots.	300.00	-
ACS grade truckload	11.32	13.55	coarse, 20-25, coarse, bgs., ton lots.	300.00	-
Potassium-magnesium sulfate, std., bgs., works.	59.00	-	Pumice, imp., Hellen, fines, bgs., ton lots, f.o.b. East Coast	280.00	-
ACS grade truckload	67.00	-	medium, bgs., ton lots, f.o.b. East Coast	285.00	-
MSGS bulk, works	87.00	-	coarse, bgs., ton lots, f.o.b. East Coast	300.00	-
Potassium metasilicate, gran., dms., 1-l. works.	.44	-	Pyrazole, red (red 3B), dms., works.	5.25	5.3
Potassium molybdate, 60-62% min. K ₂ O, 2-lb. dms., c1., 1-l. works, fr. equid., f.o.b. Sask. Canada	44.00	45.00	Pyrethrum flowers, fine grad. 0.8% pyrethrins, ton lots, fr. alt.	1.91	-
soluble, fine std., f.o.b.	46.00	47.00	Pyrethrum, purif., 20% pyrethrins, dms., works.	37.50	37.5
coarse, f.o.b. Sask.	48.00	51.00	Pyridine, rafd., 2-deg., c1. works.	5.90	-
Potassium nitrate, fert. grade, std., 50-ton c1., divd. SE.	287.00	274.00	Pyridine, tanks	5.70	-
prilled	277.00	284.00	Pyridine hydrochloride, USP, 100 kilos or more, divd.	28.00	33.00
Potassium nitrate, tech., gran., bgs., c1., 1-l. works, fr. alt.	47.00	51.00	Pyrites, Canadian 48-50% S, mines	4.50	6.00
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. ton, fr. equid.	2.54	-	Pyrogallol acid (see Pyrogallol)	13.70	15.25
Potassium persulfate, 100-lb. dms., 2,000-lb. lots, fr. alt.	1.62	-	Pyrogallol, 100-lb. dms., 1,000-lb. lots, divd.	13.70	15.25
Potassium pentaborate, gran., bgs., c1. works.	1.01	-	Quassia chips	.57	-
dms., same basis	1.08	-	Quinacridone maroon, dms., fr. alt.	20.75	24.25
Potassium persulfate powder 15c per lb. higher.	1.08	-	red, dms., fr. alt.	17.75	18.25
Potassium perchlorate, 100-lb. dms., 2,000-lb. lots, fr. alt.	.78	-	scarlet, dms., fr. alt.	21.75	24.25
Potassium permanganate, free flowing, bulk, hopper trucks, works.	1.08	-	violin, dms., fr. alt.	17.75	18.25
50-kg. dms., same basis	1.17	-	Quinco acid, bgs.	2.00	2.75</

Rice bran oil, refined dms. l.t.	lb.	1.25
Steroleic acid (see Castor oil acids, split)		
Roche salt (see Potassium-sodium tartrate)		
Roasting oil (see Castor plant)		
Root of mt. Pin. Bulgarian, otto.	bot.	90.00
" " " "	bot.	3850.00 3890
Turkish otto, bot.	kilo	2260.00 3000
Rosemary oil, N.Y., Spanish, dms.	l.t.	8.03
Turkish dms.	kilo	8.75 15
Rotomane resins, 30-45%, 100-lb. dms.	works.	21
" " "	unit-lb.	

Saccharin NF, gran. soluble, dms.	1,000-lb. lots, f.o.b.	2.50
Saccharin NF, powder, soluble, dms. less than 20,000-lb. lots, fr. alt. lb.		3.75
Safflower oil, non-toxic tanks, N.Y., lb. edible dms. N.Y., chvd.		1.47 .80
Sage leaves, Distillation works, ton		93
Sageleaf, lbs.		1.40
Israel		.80
Sago oil, Clary, French, bons.	kilo	90.00
Spain	kilo	9.50
Sagittaria, tons		12.50
Salsaldehyde, tanks, f.o.b.	lb.	3.60
Saltsulfate, N.Y. gran. powd., dms., 2,000-lb. lots, c.i.f. works		1.07
Saltyside acid, tech., dms., c.i., t.l. works		1.23
USP, cryst., dms., 1,000 lbs. or more	lb.	1.33
USP, powd., dms., 1,000 lbs. or more	lb.	1.68
Salt(s) Phenylacetylsulfate		
Salt, exported, common, 80-lb. bgs., c.i.f., North, works	80 lbs.	4.02
bulk, same basis	ton	60.00
Salt, chemist grade, same basis	80 lbs.	4.30
Salt, nat. med. coarse, same basis	80 lbs.	2.70
bulk, same basis	ton	18.00
Saltzine, cond. bulk, works, 100% H ₂ SO ₄ , basis, f.o.b. works E ton same W		85.00 98
Sandalwood oil, E. Indian	kilo	145.00
Indonesian	kilo	102.00
Sarcosine, tech., tanks, works, fri. equal		
Schaeffer's salt, paste, 100% basis, works	lb.	2.59
Scopolamine hydrobromide, USP, 100-cg. feds.	oz.	36.00
Sediment, CP, bgs., c.i., works	lb.	2.14
putt. bgs., c.i., works	lb.	2.13
Sedimentum, dms., 5,000-lb. lots, lb.		30½
Selenium, powd., 99.99% Se, dms., cond., 99.9% Se, same basis	lb.	13.00 10.00
Senna leaves, Alexandrian, whole and ball, lbs.		.75
Times No. 1, lbs.	lb.	.70
powd., lbs., 200 mesh	lb.	.99
Seesame oil, USP, dms. t.c.I.	lb.	1.00
Seesame seed, Central American, bulk, bgs.	lb.	.50
Silena pigment, bulk, works	lb.	
c.i.f. works	lb.	.19½
Silk, paper bgs, t.c.I., works	lb.	18¼
Silica, asphgt, dry-grd., bgs., c.i., work 85%, 200 mesh		31.00 32
99%, 200 mesh	ton	32.00 33
85%, 97%, 325 mesh	ton	34.50 35
85%, 325 mesh	ton	37.00 38
99.5%, 325 mesh	ton	51.50 54
Silica, dry-grd., bgs., c.i., work 99.9%		
100 mesh, micronized	ton	72.00 75
under 15 microns, mized	ton	70.50 80
99% under 10 microns, mized	ton	104.00 108
SiO ₂ , hard quartz, 99.9% SiO ₂ , 325 mesh, bgs., c.i., works		37.00
Silicon, 100% c.i., works	ton	34.75
Silico trichloride, tech., dms., c.i., works	lb.	.60
" " " "	lb.	.30
Silverization, Ingots, c. by oz.		5.175
Silver chloride, 80% AgNO ₃ works	lb.	4.16
Silver nitrate, ACS, 58.2 Troy oz. AGI 100 mgmt. oz. AgNO ₃		
Skepsack, crushed, lbs.		3.10
pond, lbs.	lb.	1.00
Soda ash, dense, 58%, 100-lb. paper		1.36
bulk, c.i., works, f.o.b.	ton	120.00
light 58%, 100-lb. paper, bgs., c.i., same basis	ton	83.00
same basis	ton	160.00
bulk, c.i., same basis	ton	123.00
Soda, caustic, liq., 50%, sellers tanks, Gulf Coast works, f.o.b. pri.		
equal, 75% NaOH	ton	175.00
75% NaOH	ton	205.00 22
72%, 400-lb. c.i., works	ton	500.00 87
solid, 76%, 700-lb. dms., c.i., works	ton	520.00 57
76%, 450-lb. dms., c.i.	ton	520.00
brands, 76%, 400-lb. dms., c.i.	ton	
Price for liq., rayon-type, \$15 ton higher, \$25.00 in W higher for solid, and \$20-\$30 ton higher for g loads		
Soda salt, concn., bgs., c.i. works	100 lbs.	3.35
Sodium acetate, anhyd., bgs., c.i., f.o.b. works		
Sodium acetate, USP, 80% gran. 100-lb. dms., c.i., works		.54
Sodium alginate, NF, white powd., cond. 300 lbs. or more	lb.	6.00
Sodium antimoniate, f.o.b., 100-lb. lots or more	lb.	
Sodium arsenite, liq., c.i., dhd. E ton		4.73
Sodium ascorbate, USP, dms., 100 lb. lots	lb.	1.48
Sodium benzoate, tech., bgs., c.i., t.l. works		9.30 11
Sodium benzoylate, USP, 50-lb. bgs., c.i., f.o.b. alt.		70½
100-lb. same basis	lb.	.85½

Sodium bicarbonate, USP, powd, reg. grade, bgs, c.i., tl., works, frt. equivd.	100 lbs.	17.08	Sodium orthosilicate, tech., anhyd., bgs, c.i., works, frt. equivd.	100 lbs.	34.50
coarse, same basis,	100 lbs.	18.05	Sodium orthosilicate, tech., hydrate, fike, dms, c.i., works, 100 lbs.	27.45	
fine, same basis,	100 lbs.	17.20	bgs, c.i., works,	28.25	
gran., same basis,	100 lbs.	17.80	Sodium oxalate, 90% hydrate, fike, dms, c.i., works, 6	46	
gran, fike, same basis,	100 lbs.	17.60	Sodium pentachlorophosphate, fike, c.i., 30,000-lb. min.,	88	
Sodium bicarbonate, gran, bgs, c.i., tl., works, frt. equivd.	100 lbs.	17.80	Sodium perborate (see Phenobarbital-sodium).	88	
Sodium bifluoride, 400-lb. dms., c.i., frt. equivd.	100 lbs.	57	Sodium perborate, tetrahydrate, fike, dms, c.i., works, 100 lbs.	32½	
100-lb. bgs, c.i., same basis,	100 lbs.	78	Sodium persulfate, 225-lb. dms, 24,000 lbs.	83½	
Sodium bisulfite, bulk, c.i., works, frt. equivd.	100 lbs.	176.00	55-lb. bgs, same basis, fike,	82	
dms., c.i., works,	100 lbs.	13.00	Sodium phenobarbital (see Phenobarbital-sodium).	83½	
Sodium bisulfite, anhyd, bgs, c.i., tl., works, East,	100 lbs.	28.50	Sodium phosphite, anhyd, fike, dms, c.i., works, frt. equivd.	76	
West,	100 lbs.	32.00	Sodium phosphate, anhyd, fike, dms, c.i., works, frt. equivd.	54.60	
Sodium bisulfite, 35% bulk, 100-lb. basis, works, East,	100 lbs.	20.80	food grade, same basis, 100 lbs.	57.50	
sch., 100% bulk, works, 100-lb. basis, photographic grade, 43% sch., works,	20.00	21.90	Sodium phosphate, monobasic, tech., same basis,	68.75	
Sodium borate NF, gran., bgs, c.i., works,	100 lbs.	51	food grade, same basis, fike,	65.75	
powd., same basis,	100 lbs.	52	trabasic, tech., same basis, 100 lbs.	62.25	
Sodium borohydride, 100-lb. dms., 1000-5000 lbs. works,	219.00	19.88	food grade, same basis, 100 lbs.	63.25	
Sodium borohydride, stabilized water soln., 12% NaBH ₄ , 100% basis, 3000 gal. tankwagon, works, 400-lb. dms., f.o.b. works,	17.45	1.04	cryst. tech., same basis, 100 lbs.	61.50	
Sodium carbonate, decahydrate, bgs, c.i., tl., works,	284.00	1.04	food grade, same basis, same basis,	35.00	
Sodium carbonate, anhyd, fike, dms, c.i., works, frt. equivd.	392.00	440.00	USP, dried, powd., bgs, dms., works,	31.50	
Sodium carbonate, monohydrate, bgs, c.i., tl., works,	392.00	440.00	Sodium chromate, tech., paste, 200-lb. dms., dry bases, dms.,	6.50	
Sodium carboxymethylcellulose (see CMC).	392.00	440.00	Sodium pyrophosphate, 2,000-lb. or more, f.o.b. works,	54	
Sodium chloride, tech., fike, c.i., tl., f.o.b. works,	420.00	440.00	Sodium pyrophosphate, acid, tech., bgs, c.i., works, frt. equivd.	58.25	
Sodium chloride, cryst., 450-lb. dms., c.i., works, E. (see Salt).	27		food grade, non-leavening, bgs, c.i., works, frt. equivd.	61.25	
Sodium chloride, USP, reg. grade, bgs, lb.	29		Sodium pyrophosphate, fike, dms, c.i., tl., works,	3880	
Sodium chlorate, tech., dms, c.i., works,	1.17	1.27	Sodium pyrophosphate, tetrabasic, anhyd, tech., bgs, c.i., tl., works, frt. equivd.	44.75	
Sodium chromate, anhyd., dms., c.i., tl., works,	87		bulk, hopper cars, same basis,	42.50	
Sodium chromate, tetrahydrate, fike, c.i., tl., works,	84		food grade, bgs, c.i., tl., same basis,	53.00	
Sodium citrate, gran, anhyd., 200-lb. dms., c.i., tl., N.Y.,	1.95		Sodium selenate, USP, cryst., 200-lb. dms., 1,000-lb. or more, works, frt. equivd.	3.00	
Sodium citrate, USP, reg. grade, 100-lb. bgs, tl., f.o.b. shipping point,	74½		USP, powd., 200-lb. dms., 1,000-lb. or more, same basis,	3.05	
Sodium cyanate, dms, 1,000-lb. lots, works,	85		Sodium sesquicarbonate, bulk, c.i., tl., works,	170.00	
Sodium cyanide, briquettes, fike, dms, 99% min., 200-lb. dms, min., f.o.b. works,	68		bgs, c.i., tl., works,	198.00	
Sodium diacetate, anhyd., dms, c.i., works,	68		granulate, solid, 3.25 ratio, bulk, c.i., tl., works,	15.70	
Sodium diacetate, FCC, 50-lb. bgs, tl., divd E. of Rocklax,	61	67	bgs, c.i., tl., works,	27.75	
Sodium diacetate, tech., 50-lb. dms, c.i., works,	52		1.95-2.00 ratio, bulk, c.i., works,	20.30	
Sodium erythorbate, 100-lb. or mixed tl., f.o.b. shipping point,	2.60	2.85	bgs, c.i., tl., works,	22.15	
Prices W. of Denver 2c. per pound higher.			"Ratio" indicates percentage by weight of SO ₂ by percentage by weight of Na ₂ O.	8.30	
Sodium ferrocyanide, bgs,	80		Sodium silicofluoride, bgs, c.i., tl., works, frt. equivd.	17.95	10
Sodium fluoroborate, tech., gran, dms, tl., works, frt. equivd.	83.75		Sodium silicate, dms, vks. frt. and E.	N.A.	
Sodium fluosulfate, white, bgs, frt. equivd., bgs, c.i., works, frt. equivd.,	1.45		Sodium sulfamate, dms, works,	22	
100 bgs, c.i., same basis,	60		Sodium sulfate, NF XII, powd., dms, 1,000-lb. or more, works,	23½	
USP powd., 200-lb. dms, tl., f.o.b. shipping point,	4.88		tech., delugent, rayon, tech., c.i., works, Gulf,	90.00	86
Sodium formate, bgs, frt. equivd., bgs, c.i., works, frt. equivd.,	2.99		Sodium sulfate, West, bulk, c.i., works, frt. equivd.	90.00	101
Sodium gluconate, tech., 50-lb. bgs, 2,500 lbs. or more frt. alt., lb.	80		bulk, c.i., East, same basis,	113.00	114
Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms, 10 dms, works,	1.85		Sodium sulfate, photo grade, 100-lb. bgs, c.i., works,	47.00	83
Sodium hydrosulfite (see Sodium ahydrosulfite).			Sodium sulfide, fike, 70-72% dms., c.i., works,	600.00	
Sodium hydrofluoride, dms, c.i., tl., f.o.b. shipping point E.	84		liq., 44-45%, tanks, works, frt. equivd.	500.00	
Sodium hydroxide, 98% pellets, 100-lb. dms, c.i., tl., works, frt. equivd.	95	98	Sodium		
Sodium hydroxide, tech. (see Soda caustic).			Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	410.00	
Sodium hypochlorite, reg. grade, 50-lb. dms, f.o.b. works,	1.425	1.50	Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
110-lb. dms, c.i., works,	1.47	1.52	Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium hyposulfite (see Sodium thiosulfate).			Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium iodide, USP, cryt., 30% to 80% lots, dms, c.i., works, frt. equivd.,	14.72		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium lauryl sulfate, 30%, tanks, f.o.b. works,	29	32	Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium lignin sulfonate, bgs, c.i., works,	25.50		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium metabisulfite (see Sodium bisulfite).			Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium metaphosphate, octahydrate, gran, bgs, c.i., works,	38		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
tetrahydrate, gran, bgs, c.i., works,	49		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium metasilicate, 18-lb. bricks, dms, c.i., works,	93		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
laked, dms, 24,000-lb. lots or more, works,	87		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium metaphosphate, tech, bgs, c.i., f.o.b. shipping pt. frt. equivd.	61.60		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
food grade, bgs, c.i., works, frt. equivd.	68.25		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium metasilicate, anhyd, bgs, c.i., works,	27.25		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
bulk, c.i., works,	25.30		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
phenobarbital, bgs, c.i., f.o.b. shipping point,	18.95		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
bulk, c.i., works,	17.20		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium monohydrate, anhyd, dms, c.i., works, 100 lbs and over,	4.87		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
cryst., dms, tl., same basis,	7.42		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium naphthalene, dms, c.i., tl., f.o.b. works,	2.01		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Nitre, USP, reg. grade, 100-lb. frt. equivd.	34.90		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Sodium nitrate, com. industrial, bgs, c.i., works,	26.00	292.00	Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
bulk, c.i., works,	25.00		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
imp., anhyd, bgs, c.i., works,	205.00	214.00	Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
Gulf whs.,	189.00		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
bulk, c.i., same basis,	140.00		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	
imp., anhyd, bgs, c.i., works,	140.00		Sodium sulfide, fused, dms., c.i., works, E., frt. equivd.	500.00	

CHEMICAL PRICES		WEEK ENDING AUGUST 29, 1988
	Sorbitan monooleate, dms., c.i., l., 30,000 lb. min., f.o.b. works.....lb.	78
	Sorbitan trioleate, c.i., l., 30,000 lb. min., f.o.b. works.....lb.	80
	Sorbitol, USP, reg. 70% aqueous dms., c.i., f.o.b. shipping point.....lb.	35
	tarika, f.o.b. shipping point.....lb.	30
	gran., dms., c.i., l., works.....lb.	70
	powd., dms., c.i., l., works.....lb.	68
	Soybean meal (See Oils, Fats & Waxes market report.)	
	Soybean oil (See Oils, Fats & Waxes market report.)	
	95% acid, tanks, New York lb.	14
	tarika, f.o.b. acid, dist. dms., lb.	48
	s.d. dms., lb.	47
	tarika, lb.	39
	Spearmint leaves, imp., lb.	2.50
	Spearmint oil, Far West, native.....lb.	14.00
	Midwest, native.....lb.	10.00
	Far West, Scotch.....lb.	15.00
	Midwest, Scotch.....lb.	14.50
	Brucine oil.....lb.	8.00
	St. John's brand, ethyl, dms., lb.	29
	Stannic chloride, anhyd., dms., works.....lb.	N.A.
	Stannous chloride, anhyd., dms., wks. lb.	N.A.
	Stannous fluoroborate, flq, conc., dms., lb.	2.50
	Stannous fluoride, dms., works.....lb.	N.A.
	Stannous sulfate, dms., works.....lb.	N.A.
	Stearic acid, double pressed, bulk.....lb.	26
	single-pressed, bulk.....lb.	28
	triple-pressed, bulk.....lb.	32
	Stearonium leaves, bgs.....lb.	15
	Streptomycin sulfate, USP, bulk, kilo.	47.00
	Strontium carbonate, glass grade, lb. works.....lb.	37 1/4
	Srtrontium nitrate, 50-15 bgs., c.i. works.....lb.	51.50
	Styrene monomer 90% min., l.c. l., f.o.b. works.....lb.	21
	Styrene-acrylonitrile resin, nat., bulk, f.o.b. plant.....lb.	77
	cryst, bulk, same basis.....lb.	77
	Styrol acetalate, dms., lb.	2.35
	Succinic acid, purif., cryst., dms., l., ft. acid.....lb.	1.00
	Suclohalobutylamine, dms., lb. work.....lb.	2.71
	Sucrose, ref., white, bgs., c.i., f.o.b. ref., lb.	33.10
	Sucrose acetate, 100 lbs. dms., l., dtd., works.....lb.	1.18
	tarika, dtd., works.....lb.	1.10
	100% dms., l., dtd., works.....lb.	1.18
	Sucroal octa-acetate, denaturing grade, 100 lb. dms., f.o.b. works.....kilo	12.50
	Sulfabenzamide, dms., 500 kilos, kilo.	39.50
	Sulfabenzamide-capric, dms., 500 kilos, kilo.	25.00
	Sulfacetamide, USP, dms., 500 kilos, kilo.	20.00
	Sulfadiazine, USP, powd., dms., 500 kilos, kilo.	53.00
	Sulfadiazine-sodium, USP, dms., 500 kilos, kilo.	40.70
	Sulfamerazine, USP, microcrystals, dms., 500 kilos, kilo.	33.00
	USP, powd., dms., 500 kilos, kilo.	32.50
	Sulfamerazine-sodium, USP, powd., dms., 500 kilos, kilo.	13.00
	Sulfamethiazole, powd., dms., 500 kilos, kilo.	9.50
	Sulfamite acid, cryst., bgs., c.i., l., works.....lb.	38.00
	Sulfamite acid, gran., 100 lbs. works.....lb.	36
	Sulfanilamide, NF, reg. 1,000-lb. dms., l., ft. acid.....lb.	2.00
	Sulfanilic acid, tech., bgs., c.i., l., works.....lb.	67 1/4
	Sulfaliquinoxaline, veterinary, grade, dms., 500 lbs. works.....lb.	8.00
	Sulfur, conc. high, 150 lbs. vases, Gulfports.....lb.	150.00
	T.O.B. La. ref.....lb.	125.50
	recovered, dtd., Houston, long-ton.....lb.	128.50
	recovered, dtd., Houston, long-ton.....lb.	135.00
	f.o.b. tanks, Alberta, Canada, for US delivery.....lb.	102.00
	dark, ex-Tampa, Fla., long-ton.....lb.	167.50
	Sulfur, crude, 90-95% min. purity, coils, 50-bb. bgs., same basis.....lb.	13.60
	lump, same basis.....lb.	13.60
	Sulfur, ref., 98.5% min. purity, rolls 50-bb. bgs., same basis.....lb.	17.50
	flour, light, 50-bb. bgs., same basis.....lb.	20.00
	Sulfur, ref., sublimed, 98.5% min. purity, 50-bb. bgs., c.i. minres basis.....lb.	20.00
	Sulfur, rubbermakers, 98.5% min. purity, 50-bb. bgs., c.i. minres basis.....lb.	14.80
	fls, 98% min. passing through 325 mesh, same basis.....lb.	16.10
	Sulfur dioxide, 100 lb. works, l., ft. acid.....lb.	24
	tarika, same basis.....lb.	27 1/4
	Sulfur dioxide, 100 lb. work, multi-unit cars, dms., f.o.b. works.....lb.	275.00
	tarika, works.....lb.	215.00
	Sulfur monochloride, dms., c.i., works, l., ft. acid.....lb.	22 1/2

WEEK ENDING AUGUST 29, 198

	Sortalin monotearate, dms., c.i., l.i., 30,000 lb. min., f.o.b. works.....	78	—
	Sortalin tetrastearate, c.i., 30,000 lb. min., f.o.b. works.....	80	—
	Sortolite, USP, reg. 70% aqueous, dms., c.i., f.o.b. shipping point.....	35	—
	Sortolite, USP, reg. 70% aqueous, tanks, f.o.b. shipping point.....	30	—
	gran, dms., c.i., l.i., works.....	70	—
	powd., dms., c.i., l.i., works.....	68	7
	Soybean meal (See Soybean meal report)		
	Soybean oil (See Cuts & Waxess market report)		
	Soybean oil defatted, soapstock, 95% acid, tanks, New York lb. Soybean oil, acid, dist., dms., c.i., works.....	14	1
	s.d., dms.....	48	4
	s.d., dms.....	47	5
	tanks.....	38	4
	Stannous diphenyl, imp., lb.....	2.50	27
	Stannous chloride, native, lb.....	14.00	15
	Stannous chloride, native, lb.....	10.00	12
	For West, Scotch.....	15.00	15
	For West, Scotch.....	14.50	15
	Stannous chloride, native, lb.....	8.00	—
	St. John's bread, edible, lbs.....	29	3
	Stannic chloride, anhyd, dms., works.....	lb.	N.A.
	Stannous chloride, dms., works.....	lb.	N.A.
	Stannous fluoride, kg, concn, dms., l.i., works, l.i., equal.....	2.50	—
	Stannous oxide, dms., works.....	lb.	N.A.
	Stannous sulfate, dms., works.....	lb.	N.A.
	Stearic acid, double pressed, bulk.....	26	—
	single pressed, bulk.....	28	—
	single pressed, bulk.....	15	—
	Stramonium leaves, bgs.....	47.00	—
	Streptomycin sulfate, USP, bulk, kilo Strontium carbonate, glass grad, bgs., works.....	37 1/2	—
	Strontium nitrate, 50-15 bgs., c.i., works.....	100 lbs	51.50
	Styrene monomer, 99.8% min., l.i., f.o.b. works.....	21	—
	Styrene-acrylonitrile, native, bulk, f.o.b. plant.....	77	—
	cryst, bulk, same basis.....	77	—
	clard, same basis.....	77	—
	Styrolene, dms.....	2.35	—
	Succinic acid, purif., cryst., dms., l.i., f.o.b. dist.....	2.00	—
	Succinic anhydride, dms., c.i., l.i., f.o.b. dist.....	1.71	—
	Surorose, refd., white, bgs., c.i., f.o.b. mly. E.....	100 lbs	33.10
	Surorose acetate, isobutyrate, 90% dms., l.i., dist.....	1.18	—
	tanks, dtd.....	1.10	—
	100% dms., l.i., dtd.....	1.12	—
	Surorose acta-acetate, denaturing grade, 100-100 lb. bgs., f.o.b. works.....	12.50	13
	Sulfabenzamide, dms., 500 kilos, kilo Sulfabenzamide-sodium, dms., 500 kilos.....	39.20	—
	Sulfacetamide, USP, dms., 500 kilos.....	26.00	—
	Sulfadiazine, USP, powd., dms., 500 kilos.....	20.00	23
	Sulfadiazine-sodium, USP, dms., 500 kilos.....	40.70	—
	Sulfamerazine, USP, microcrystals, dms., 500 kilos.....	33.50	—
	USP, powd., dms., 500 kilos.....	32.00	—
	Sulfamethazine-sodium, USP, powd., dms., 50 kilos.....	13.00	—
	Sulfamethazine, powder, dms., kilo Sulfanilic acid, cryst., bgs., c.i., l.i., works.....	9.50	10
	Sulfanilic acid, cryst., bgs., c.i., l.i., works.....	38.00	41
	Sulfanilic acid, gran., dms., c.i., l.i., works.....	38	—
	Sulfanilamide, NF, reg. 1,000-lb. dms., l.i., equal.....	2.00	—
	Sulfonilic acid, tech., bgs., l.i., f.o.b. works.....	87 1/2	—
	Sulfisoxazole, veterinary, grade, dms., 100 lbs.....	8.00	—
	Sulfur, crude, bright, molten, dms., f.o.b. New York, 500 tons.....	150.00	—
	f.o.b. La. ref.....	125.50	—
	recovered, dtd., Houston, long-ton external, Rotterdam.....	125.50	—
	f.o.b. Tampa, A.B.C. Co., long-ton delivery.....	135.00	—
	dark, ex-Texas, f.o.b., long-ton Sulfur, crude, 99.5% min. purity, cont. flour, 50-50 bgs., same basis.....	102.00	—
	lump, same basis.....	167.50	—
	Sulfur, refd., 98.5% min. purity, rolls 50-lb. bgs., same basis.....	13.90	—
	ele.....	13.90	—
	flour, light, 50-lb. bgs., same basis.....	17.50	—
	Sulfur, refd., sublimed, 99.5% min. purity, 50-lb. bgs., c.i. mixed basis.....	20.00	—
	Sulfur, rubbermakers, 99.5% min. purity, cont. reg. 50-lb. bgs., c.i. mixed basis.....	29.00	—
	ins, 98% min. passing through 325 mesh, same basis.....	100 lbs	14.80
	Sulfur disulfide, dms., c.i., works, l.i., equal.....	16.10	—
	tanks, same basis.....	24	—
	Sulfur dioxide, kg., coml. multi-unit dms., f.o.b. works.....	275.00	—
	Sulfur monochloride, dms., c.i., works, l.i., equal.....	210.00	220
	Sulfur monochloride, dms., c.i., works, l.i., equal.....	222 1/2	—



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CHEMICAL PROFILE

PARAXYLENE

SEPTEMBER 1, 1986

SUPPLY PRODUCER	CAPACITY*
Amoco, Decatur, Ala.	1,077
Amoco, Texas City, Tex.	1,100
Chevron, Pascagoula, Miss.	800
Exxon, Baytown, Tex.	700
Lyondell, Houston, Tex.	400
Phillips, Guyana, P.R.	470
St. Croix Petrochemical, St. Croix, V.I.	600
Koch, Corpus Christie, Tex.	450
Tenneco, Chalmette, La.	140
Total	5,437

*Millions of pounds annually. Chevron expanded its capacity by about 170 million pounds per year through debottlenecking efforts in 1985. Exxon has also undergone debottlenecking efforts and improved its capacity by 200 million pounds per year since 1983. Koch underwent improvements in energy efficiency which produced a 60 million-pound-per-year capacity increase in 1985. Profile last published 8/22/83; this revision, 9/1/86.

DEMAND
1985: 4.5 billion pounds; 1986: 4.7 billion pounds; 1989: 5.23 billion pounds.

GROWTH
Historical (1975-1985): 4.1 percent per year; future: 3 percent per year through 1990.

PRICE
Historical (1973-1986): High 31c. per pound; bulk, divd.; low 6 1/4c. per pound bulk, frt. equal.; Current: 19 1/2c. per pound, divd., contract; spot, 18c. per pound f.o.b.

USES
Dimethyl Terephthalate and terephthalic acid for saturated polyester production, 100 percent (except negligible amounts) for use as solvents, coating or pesticides. This includes 75 percent for domestic consumption and 25 percent for export.

STRENGTH
World growth in paraxylene is expected to be as high as 4 percent per year. Spot prices, usually for export material, are currently firming. US producers have just completed an across-the-board shift to higher purity standards. Orthoxylene and metaxylene contents have been reduced by 0.1 and 0.4 percent respectively. Overall purity standards have been raised from 99 percent to 99.5 percent minimum p-xylene content. PET resin, a downstream paraxylene product is growing by about 10 percent annually in the US.

WEAKNESS
Domestic consumption of paraxylene for polyester fiber raw materials is stagnant due to increased textile production overseas.

OUTLOOK
The world market is a promising one for paraxylene. New DMT-TPA facilities overseas, particularly in the Far East, are expected to expand demand for US product. Rising demand for PET resins and the expected introduction of the PET 12 oz. "can" and new PET bottle sizes could create a rapidly growing demand for paraxylene.

PLATFORM

LNG Outlook

The following is excerpted from an assessment of the LNG outlook by Malcolm Peebles, director of Shell International Gas Ltd.

The uncertainty surrounding energy prices is not a conducive climate in which to make major investment decisions. Inevitably a wait and see attitude prevails. Thus, if a return to a stronger price regime is delayed for several years, this will almost certainly mean a corresponding delay in LNG project development until better days are here again. But such delays would not be confined to LNG projects and would embrace the majority of capital intensive energy projects. The evidence for this is already with us, with the growing numbers of cancellations and postponements announced each month around the world.

Meanwhile, a continuing period of low energy prices is likely to stimulate energy demand with the possible consequence that forecasts of supply/demand deficits are likely to come forward rather than slip back in time.

Time For Innovation

I would hope that while we are all waiting for these upturns in demand and in prices to occur, the LNG industry will not sit idly by. This breathing space, if that is what it is, in project implementation can be put to good purposes. It is time for innovative thinking and planning: a time to examine new ways to reduce unit costs, to investigate the technical and economic scope for smaller scale projects, to explore new and cost-effective techniques, to study new ways of project financing, to review contractual and operational terms and conditions — the list of useful tasks to be undertaken is almost endless. Moreover, these tasks are not confined to the sellers' side, as buyers will need to give thought to how they can give some price and offtake security to sellers to ensure the timely development of new projects.

Successful work along these lines will put the LNG industry in good shape to press on quickly and rigorously the moment the economic climate for LNG starts to improve. In fact, time is not on our side as one can be almost certain that LNG's competitors will be doing much the same thing as they gear themselves for a return to more normal trading conditions.

I think that the realities of the past few years have shown that none of us has been very successful at forecasting the future. The recent Soviet nuclear power accident has provided a tragic reminder that we live in an uncertain and unpredictable world. It is too early to assess the long term effect of that particular incident, but it does highlight the point of future uncertainty. I referred earlier

to a window of opportunity in Western Europe. I think the keynote for the future in all markets of interest is a readiness to seize opportunities wherever and whenever they occur, and this requires a continuing effort from potential buyers as well as from potential sellers. Indeed existing and prospective buyers of LNG would be well advised to ensure that they cherish and safeguard their supplies so as to be well-placed when the inevitable upturn in energy demand occurs with its consequential pressures on supply.

During the 1970's the United States was expected to become at least as big a market for LNG as Japan. During the last few years all import schemes have either been cancelled or have been suspended indefinitely. As always, with the benefit of hindsight, there are good explanations. One of the principal ones was price deregulation. The US Natural Gas Policy Act of 1978 effectively allowed constantly escalating gas prices and by the early 1980s had created a supply glut, the reverse of the situation prevailing when LNG contracts were developed. Initially, 'high cost' LNG could be accommodated, within limits, by rolling it in with lower priced locally produced gas against a backdrop of rising oil prices. It became unmarketable, though, when energy prices started to decline from their peak and lower priced local gas supplies became more than adequate for a declining demand.

The present role of LNG in Western Europe is a little better, but here again past expectations have not been realized. Among the contributory factors have been:

- The emergence of Norway as a major alternative gas source
 - Growing availability of Soviet and Dutch gas at competitive prices
 - A perception in Western Europe that North African LNG was becoming too expensive compared with alternatives
 - The downturn in energy demand caused by rising oil prices in the late 1970s.
- As far as Japan — the world's largest LNG market — is concerned, forecasts have been rather better, albeit towards the lower end of the range than at the higher levels expected some years ago. Japan is a highly competitive market with nuclear and coal the main alternatives to LNG for power generation, which in turn comprises about three-quarters of the existing outlet for LNG in Japan. These strong competitive pressures, as well as the technical need to allow for some oil-based generating capacity for load balancing purposes, are expected to moderate future growth rates for LNG as compared with the past.

Moreover, the extent to which new supply sources will be needed in the 1990's and beyond will be heavily conditioned by whether or not existing projects are expanded during their contractual lifetime, and/or extended when their contractual obligations expire.

JOBS & PEOPLE



Michael S. Leo, who has been named to the newly-created position of senior vice-president and chief administrative officer of Rhone-Poulenc Inc. He was previously with International Paper Company.

JIM D. GRIEBEL has been named marketing manager of power generation chemicals and business manager for the refining industry in the water treatment chemicals group at Nalco Chemical Company. LARRY J. REMONT has joined Petrolite Corporation as drilling fluids manager for the company's oil field chemicals group. FERRIL MCCARTHY has been named to the newly created position of director of marketing at Widger Chemical Corporation.

FRED E. COOPER has been appointed senior sales representative at Virginia Chemicals Inc. DR. NEAL D. CONRAD has joined M&T Chemicals Inc. as a senior research chemist in the company's plastic additives research group. DR. HEINZ RZEHA has been named manager of applied research and technical service at the Allendale, N.J., laboratory of Degussa Corporation's Chemicals Division.

JEFFREY A. FEISER has been appointed



J. Griebel

L. Remont

Cyclo Industries Names Technical Sales Reps

Cyclo Industries, maker of specialty chemicals for the cosmetics, soap and detergents, mining, plastics and petroleum industries, has appointed Tom Burns and Larry Merchant as technical sales representatives.

Mr. Burns will be based in Cyclo's Miami, Fla., headquarters and will cover the Florida market. He was previously with McKesson Chemical Company.

Mr. Merchant will cover the Southeastern US and will be based at Cyclo's Atlanta distribution center. He was most recently with Van Waters & Rogers in Atlanta.



T. Burns

L. Merchant

sales representative for the Allied-Kelite Division of Witco Corporation, covering the Southwestern Ohio and East-Central Kentucky territory. JAMES J. MARKHAM has been named product manager for Metal Coatings International Inc.'s "Dacromet" corrosion resistant coating line.



F. McCarthy

F. Cooper

R. STEVE HUGHES has joined Magnatrade Corporation as a manager of the company's Chemical Division and DWIGHT L. MOORE has also joined the firm as a Chemical Division manager. DELBERT F. TOLAN has been named West Coast regional manager for fluid cracking catalysts in the Ketjen Catalysts Group of Akzo Chemie America.

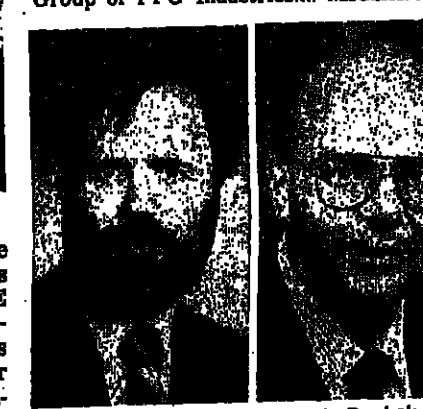


J.R. Crozier, who has been appointed vice-president and assistant general manager of USI Chemicals, part of National Distillers & Chemical Corporation.

JOHN W. MATT has been appointed director of manufacturing in the Inorganic Chemicals Division of Mobay Corporation. JOHN G. AUSTIN has been named sales representative for the Ohio, West Virginia and Western Pennsylvania sales territory at Reed Plastics Corporation. DENNIS CARLETON has been appointed director of parenteral operations for E.R. Squibb & Sons.

JANIS A. BALDASSARI has been appointed sales representative for Sannor Industries in New Jersey, Pennsylvania, Maryland and Delaware. WILLIAM M. OLLER has been named executive vice-president of Texas Eastern Products Pipeline Company. EUGENE SECOR has been named facility manager for the Wilmington, Mass., hot metal adhesive production facility of the Adhesives, Sealants & Coatings Division of H.B. Fuller Company.

LARRY L. HAMMIT has been named caustic soda product manager in the Chemicals Group of PPG Industries. MICHAEL B.



N. Conrad

D. Rzehak

Merck Appoints Two In Kelco Division

Merck & Co. Inc. has named Richard A. Empey director of quality assurance in its Kelco Division and Dr. Kenneth S. Kang director of microbiological sciences research in the division.

Mr. Empey has been responsible for implementation of Kelco's quality certification program.

Dr. Kang will be responsible for identifying, evaluating and bringing to Kelco new biotechnology and biologically-derived products as head of microbiological sciences research. He was instrumental in the commercialization of Kelco's food-grade xanthan gum, "Keltrol," in the late 1980s.



R. Empey

K. Kang

EDWARDS has been appointed director of quality management at Enron Chemical Company. ROBERT F. MENG has been named sales representative for "Tolonate"



J. Feiser

J. Markham

hexamethylene diisocyanate resins at Rhone-Poulenc Inc.

TIMOTHY R. SCOTT has been appointed a technical representative in the specialty industrial polymers group at Rohm and Haas Company. C. WILLIAM GRAY has been named vice-president of human resources at B.F. Goodrich Company.

MEETINGS CALENDAR

SEPTEMBER 1, 1986

THIS MONTH

AMERICAN CHEMICAL SOCIETY, 192nd annual meeting, Anaheim Convention Center, Anaheim, Calif., September 7-12.
CHEMICAL MARKETING RESEARCH ASSOCIATION, world chemical congress, jointly with the chemical marketing and economics division of the American Chemical Society, "The Chemical Industry: Where in the World is it Going?", Newport Resort Hotel, Newport Beach, Calif., September 7-10.
COUNCIL FOR RESPONSIBLE NUTRITION, annual meeting, "Health Messages: New Directions and New Opportunities," J.W. Marriott Hotel, Washington, D.C., September 7-10.

LATER ON

AMERICAN MICROCHEMICAL SOCIETY, eastern analytical symposium, jointly with American Chemical Society and Society for Applied Spectroscopy, New York Hilton Hotel, New York, October 20-24.

AMERICAN PETROLEUM INSTITUTE, annual meeting, San Francisco, Calif., November 8-11.
ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 100th international meeting and exhibition, The Regency Hotel, Scottsdale, Ariz., September 15-18.
ASSOCIATION OF THE NON-WOVEN FABRICS INDUSTRY, eighth international conference and exhibition, Georgia World Congress Center, Atlanta, Ga., October 21-23.
CANADIAN CHEMICAL PRODUCERS ASSOCIATION, international symposium on transportation emergency response, Vancouver, B.C., Canada, September 14-16.
CHEMICAL GROUP, NATIONAL ASSOCIATION OF PURCHASING MANAGEMENT, Fall Conference, Marriott Pavilion Hotel, St. Louis, Mo., October 21-23.
CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, seminar on aerosol technology, Ramada Hotel O'Hare, Rosemont, Ill., October 27-29; 73rd annual meeting, Marriott's Harbor Beach Resort, Fort Lauderdale, Fla., December 7-11.
CHILDRENS INSTITUTE, Fall meeting, The Homestead, Hot Springs, Va., September 21-25.
COMMERCIAL DEVELOPMENT ASSOCIATION, impact of mergers and acquisitions on the future of technology-driven corporations, Hershey Hotel, Hershey, Pa., October 28-29.
CONFERENCE BOARD, business outlook conference, Waldorf-Astoria Hotel, New York, September 24-25.
COUNCIL FOR CHEMICAL RESEARCH, annual meeting, Northwestern University, Evanston, Ill., September 28-30.
EUROPEAN PETROCHEMICAL ASSOCIATION, annual meeting, Monte Carlo, Monaco, September 28-October 1; distribution meeting, October 19-October 22.
FERTILIZER INSTITUTE, world fertilizer conference, "Global Trading Patterns," Hyatt Regency Hotel, San Francisco, Calif., September 14-16.
FERTILIZER ROUND TABLE, Sheraton Inner Harbor Hotel, Baltimore, Md., November 17-19.
FIRE RETARDANT CHEMICALS ASSOCIATION, Fall conference on proper processing and selection of flame retardants, Kiawah Island, S.C., October 19-22.
FRAGRANCE MATERIALS ASSOCIATION OF THE UNITED STATES, 10th international congress of essential oils, fragrances and flavors, Omni Shoreham Hotel, headquarters hotel, Washington, D.C., November 18-20.
K-86, 10th international trade fair for plastics and rubber, Dusseldorf, West Germany, November 8-13.

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LATIN AMERICAN PETROCHEMICAL ASSOCIATION, sixth annual meeting, Rio Palace Hotel, Rio de Janeiro, Brazil, November 23-25.
NATIONAL ASSOCIATION OF CHEMICAL DISTRIBUTORS, 16th annual meeting, Ritz-Carlton Naples Hotel, Naples, Fla., December 2-4.
NATIONAL PAINT & COATINGS ASSOCIATION, 9th annual meeting, Atlanta Hilton Hotel, Atlanta, Ga., November 3-5.
PULP CHEMICALS ASSOCIATION, 13th international naval stores meeting, Waldorf-Astoria Hotel, New York, September 18-17.
SOCIETY OF CHEMICAL INDUSTRY, chemical industry model driver, Plaza Hotel, New York, October 19-22.
SOCIETY OF THE PLASTICS INDUSTRY, plastics industry and conference — South, jointly with the Society of Plastics Engineers, Georgia World Congress Center, Atlanta, Ga., October 8-10.
SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION, OSHA compliance update and workshop, Intercontinental Hotel, New Orleans, La., September 25-26.
WOMEN IN FLAVOR & FRAGRANCE CONFERENCE, just open dinner meeting, Lower Manhattan, New York, N.Y., September 28.

BUSINESS BRIEFS

COMBUSTION ENGINEERING SIMCON Inc., Bloomfield, N.J., has been selected to supply an advanced process control system for the Qianjin Chemical Works of Beijing Yanshan Petrochemical Corporation. The project is part of an ethylene plant modernization contracted to Combustion Engineering-Lummus Crest Inc. by China Petrochemical International Company.

CYANOTEC CORPORATION, Woodville, Wash., will use the proceeds of a \$2 million private placement for expansion of production facilities for beta carotene at Kona, Hawaii. Cyanotech, a specialty producer of high value products from microalgae, is based in Woodville and has large scale culture ponds and processing facilities in Kona.

MOONEY CHEMICALS INC. has appointed two additional sales agents to supplement its marketing program to the paint and ink industries. The new agents are W.T. Bryant & Associates, Cincinnati, and Samuel P. Morell & Co. Inc., Scarsdale, N.Y. Bryant will cover parts of Central and Southern Ohio and Wheeling and Huntington, W.Va. Morell will cover the New York metropolitan area and New England.

POWELL DUFFY TERMINALS INC. will install a state-of-the-art carbon adsorption system to treat surface water runoff prior to discharge from its Bayonne, N.J., facility. The company has signed a contract with Zimpro Inc., Rothschild, Wisc., for a package "Pack" wastewater treatment system, designed to handle a maximum of 55,000 gallons of runoff water a day.

RHONE-POULENC INC.'s Specialty Plastics Division has introduced three new 2-part silicone RTV's for molding, tooling and fabricating composites, "Rhodorsil" RTV 565, 1547 and 1568. The three products are available in 1-pound, 11-pound, 44-pound and 55-gallon kils.

SOCIETY OF THE PLASTICS INDUSTRY's Fall meeting will focus on the use of epoxy formulations in adhesives. The meeting will be held at the Marriott City Center Hotel in Minneapolis, Minn., September 10-12. The program will feature speakers representing user companies, university-industrial centers and suppliers. Product liability insurance will also be covered at the Fall meeting.

STOLT-NIELSEN has taken delivery of the fifth and last of the series of 39,000-deadweight parcel tankers by the builder, Daewoo Shipbuilding & Heavy Machinery Ltd. The tanker will be used on the company's worldwide parcel tanker trade routes, carrying a wide variety of acids, chemicals, edible oils, lubricating oils and additives, and cooled semi-gases.

UNICHEMA CHEMIE BV, the Netherlands, part of the Unilever Group, has started up a new production facility for high purity dimer fatty acids. In addition to increasing capacity, the new facility enables Unichema to add new grades of dimer fatty acids to its line of specialty chemicals.